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Chapter V is made up of information on the attitudes and background of participants in an experimental freshman year program for underachieving high school graduates at Southern Illinois University. Included is a description of changes and differences among the students resulting from the experimental treatment and of the participants' reactions to the program. Data were collected from questionnaires administered to the students at the beginning and at the end of the treatment year (1962-1963). Appendixes contain copies of the questionnaires, two articles based on data collected from the program, and descriptions of response categories for various questionnaire items. (For other chapters of this report, see UD 005310, UD 006858, UD 006859, UD 006860, and UD 006861) (LB)

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Southern Illinois University

A TWO-YEAR REPORT ON THE EXPERIMENTAL FRESHMAN YEAR PROGRAM

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CHAPTER V

BIOGRAPHICAL AND ATTITUDINAL INFORMATION ON EXPERIMENTAL FRESHMAN YEAR STUDENTS

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SOUTHERN ILLINOIS UNIVERSITY

Experimental Freshman Year Program
September 1, 1964

CHAPTER V

BIOGRAPHICAL AND ATTITUDINAL INFORMATION ON EXPERIMENTAL FRESHMAN YEAR STUDENTS

Introduction

This chapter, bound separately and with its own pagination, reports the findings from questionnaires completed by the students in the Experimental Freshman Year Program, a project conducted at Southern Illinois University. The questionnaires which were administered at the beginning and at the end of the treatment year, 1962-63, were designed to secure biographical information as well as to elicit responses indicating the students' attitudes toward a variety of concepts relating to their academic success.

The Experimental Freshman Year Program (EFYP) was a pilot project designed to investigate various problems relative to the admission to college and the education of students who ranked in the lowest third of their high school graduating classes. Students were selected for entry into the EFY Program from students graduating in the lowest one-third of their high school class. The chosen students were divided into two categories based upon American College Test composite standard scores; the high category made composite standard scores on the ACT of 20 or higher, and the low category made composite standard ACT scores of 19 or lower. In the EFY Program there were originally enrolled 220 persons who were separated into three experimental groups. As explained in Part I below, a fourth group was added later. A more detailed description of subjects and selection procedures can be found in Chapter III of this report.

Part I deals with the questionnaires themselves and explains the origin and rationale of the questionnaires, the types of questions and resulting types of answers, and the methods used to analyze resultant data. Part II in this chapter describes the different treatments accorded to each EFY group; a more detailed treatment description can be found in Chapter III of this report. Part III reports the data, results, and conclusions.

The appendix contains actual copies of both the pre- and post-treatment questionnaires. Also included are the descriptions of categories used to classify student' responses to the open-ended questions in the questionnaires.

Part I. The Questionnaires

Origin and Rationale

The pretest and posttest questionnaires, examples of which can be found in appendices A and B, respectively, were developed especially for the EFY Program. The format and items were developed by the EFY staff, principally by Robert Kibler, director, and Mrs. Sandra Lutz and David T. Miles, research assistants.

The rationale for having the EFY students respond to the questionnaires was that they would provide data confirming the following general hypotheses:

1. The groups would be essentially equal on many of the demographic, biographical, and attitudinal items; therefore they would not differ in any essential variable that could cause spurious conclusions concerning results of experimental treatment.

2. The groups would differ systematically on some attitudinal items as a result of the experimental treatment.

3. Some groups would shift on attitudinal items from one testing time to the next as a result of experimental treatment, whereas other groups would not.

Types of Items and Answers

The questionnaires include two general kinds of items, distinguished by the type of answers to be elicited. Items of either a multiple-choice or "yes-no" nature are designated as "discrete-answer"; that is, there are one or more separate and discrete answers to be checked below the item. The other type, designated as "continuous-answer," asks the student to check his reaction to the item on a five-step scale utilizing at each end one of a set of bi-polar opposites. This technique was developed by Osgood and others (1957) at the University of Illinois for their now-famous "semantic differential."

Several items on each questionnaire are "open-ended"; they ask the student to write his answers in his own words. These answers were scrutinized for similarities, and categories were developed to classify the answers for purposes of analysis. The categories, their descriptions, and some examples are found in the appendix of this chapter. Classification of the open-ended responses made the items the "discrete-answer" type.

Another division of items might be mentioned. Some items appeared only on the pretest, while some appeared only on the posttest; both groups of items are designed to obtain information particularly relevant only at the time of each test. Other items appeared on both the pre- and posttest questionnaires in order to determine what changes, if any, occurred in biographical or attitudinal information for the EFY students.

Data Analysis

The data from the pre- and post-treatment questionnaires were coded and punched onto IBM cards. The data were then analyzed with an IBM 1620 computer to determine the statistical significance of differences on items among Groups I, II, and III; among groups based upon both EFY group number and ACT High/Low classification, the six-way comparison; and between ACT High's and ACT Low's. Statistically significant differences on responses to continuous-answer items were determined by a $\underline{t}$ test for independent measures. Statistically significant changes from pre- to posttest on responses to continuous-answer items were determined by a $\underline{t}$ test for related measures. Statistically significant differences on discrete-answer items were determined by chi-square, and statistically significant differences from pre- to posttest responses to discrete-answer items were determined by chi-square for related measures.

The conclusions drawn in the next part are largely those of Gruner, a research associate on the project, who assumed the primary responsibility for writing Part III and for assembling this chapter.

Part II. Description of Group Treatments*

General

There were two experimental and two control groups in this project. Groups I and II served as the experimental groups; the control groups were Groups III and IV.

The Group I treatment was a completely experimental curriculum. The Group II students were enrolled in the regular general education courses, a remedial studies course, and a counseling program. The students in Group III also were enrolled in the general education program but had no additional treatment. The students in Group IV were matched academically to those in Groups I, II, and III, but had no contact with the Experimental Freshman Year staff. The group treatments are described below.

A battery of tests was administered to the students before the program started and again during the last few weeks the program was in progress. The students in Groups I, II, and III were required to report to the University one week before classes started to complete the comprehensive testing program. The seventeen-hour pretest battery was administered in six days through the University Testing Service. The posttest battery was administered in four half-day sessions and one full-day session during the last few weeks of Spring Quarter. The first questionnaire was administered three weeks after the program started.

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*This description of group treatments is based upon that found in Harold L. Cohen, Robert J. Kibler, and D. T. Miles, "A Preliminary Report on a Pilot Study for Educating Low Achievers," The Superior Student, Newsletter of the Inter-University Committee on the Superior Student, 1964, 6 (2), 36-45.

Group I

Harold L. Cohen established the educational philosophy for the Group I program, a philosophy based in part on his experience as Chairman of the Department of Design at Southern Illinois University.

One of the most important principles in the Group I curricula was considered the holistic approach to education. Briefly, the premise is that the student should learn to comprehend general concepts and to treat knowledge as an associative whole prior to investigating the particulars of a field. An attempt was made to organize subject matter into a one-year logical sequence and to interest the students in what they were studying. High standards of academic performance were set, but students were dropped from the program only for excessive absence from class in combination with continuing low grades. The shaping of personal attitudes and behavior patterns was also considered a significant part of the Group I program.

The Group I curricula, although essentially interrelated, was divided into subject areas. Table 1 indicates the amount of time allotted for each area and shows the diminishing contact hours through the year.

TABLE 1

WEEKLY CONTACT HOURS PER QUARTER*

	Fall	Winter	Spring
University Studies	17.5	12.5	5.0
Verbal Studies	5.0	5.0	4.0
Visual Studies	5.0	5.0	6.0
An Investigation of Culture	2.0	2.0	
Iconography of God		1.0	1.0
Behavioral Psychology	1.5		
TOTALS	31.0	25.5	16.0

*Some students took regular university courses in addition to the Group I program during the Winter and Spring Quarters.

University Studies. The University Studies curriculum was designed to treat the physical, biological, and social sciences from both the scientific and the philosophic points of view. In the Fall Quarter this sequence of study included theories of cosmology; the sun and solar system; the nature of light, gravity, magnetism; the atom; the elements; the physical states of matter; and the earth sciences.

The development of a definition of life from the biological point of view was the concentration in the Winter Quarter. A biochemical approach was followed in the study of the structure of the generalized cell, the organelles and their function, the processes vital to the functioning of the cell, and the basic chemistries in the nutrition, respiration, metabolism, growth, and reproduction of cells and simple microorganisms. Simultaneously with the cell biology course, the history of man was investigated, and the definitions of a human being were considered from evidence presented by physical and cultural anthropology, ecology, evolutionary theories, religion, and philosophical speculations.

The Winter Quarter also included two activities in which individual initiative was required. First, with the use of logic and scientific method, the student was required to solve a problem much like the problems earliest man, with his limited tools and resources, must have faced. The second was an individual research problem in which the student conducted research, wrote a report, and presented a verbal or visual demonstration of his work. The areas selected ranged from the writing of poetry to experiments in behavioral science.

In the first six weeks of the Spring Quarter, the development of the government, art, crafts, industry, social structure, and philosophy of the ancient Greeks was studied. Following was a three-week study of the

Renaissance, with particular emphasis on the Florentine state. Finally, using a Sunday edition of the St. Louis Post-Dispatch newspaper as a text, the students spent the last two weeks in a review of American culture today.

Visual Studies. Visual Studies involved the student in the construction and analysis of two and three dimensional images, not to develop professional artists or designers, but essentially to encourage concern for the process of observation-analysis-communication.

The experiences of the Fall Quarter were directed mainly toward the realization of the role played by emotions in the process of seeing and interpreting one's environment, the development of a kinesthetic conception of form and structure, and the gradual development of skills in the manipulation of materials into effective communication.

In the Winter Quarter, the students experimented with a variety of organizational line systems, had a simplified experience in perspective drawing, and ended with a three-week study of color.

In the Spring Quarter, the students explored the potential of image distortion, the construction and communication of a solid form, and the design of charts which visually and verbally communicate a particular system of symbols, such as those used in astronomy, cartography, and biology. The quarter ended with an examination of problems in the communication of statistical data and a study of the visual correlation of this data in graphs and charts.

Verbal Studies. The Verbal Studies area began with a survey of the functions and problems of language with which a student is confronted when attempting to communicate purposefully. Following the study of semantics, an assignment of a series of themes prepared the student for competency in writing the major research paper required in Winter Quarter. Throughout both Fall and Winter Quarters there was heavy emphasis upon critical analysis of reference information and upon achieving clarity in writing through the use of formal grammar, rhetoric, methods of paragraph organization, and purposeful details. Also included in the first two quarters was the reading of various novels, such as The Catcher in the Rye, High Wind in Jamaica, Lord of the Flies, and The Turn of the Screw.

Spring Quarter was spent concentrating upon the literary aspects of written prose and poetry. The course included an introduction to fiction with the first six weeks given to reading the plays of Sophocles, Euripides, Aeschylus, and Aristophanes. Pursuing the ideologies of the theologians and the philosophers, the students spent three weeks studying Dante's Divine Comedy. This series was used also to correlate with the University Studies course that was emphasizing Italian Renaissance with its revival of classical literature, philosophy, and art. The final weeks of the Spring Quarter were spent concentrating upon plays which reflected dominant contemporary attitudes and ideologies.

An Investigation of Culture. J. L. Ellison, a cultural anthropologist in the Francis Parker School in Chicago, prepared the course outline, suggested materials, and introduced the course, An Investigation of Culture, by telephone lecture. Ideas such as cultural focus, ethos, status, role, and ideal types were illustrated and discussed.

At the end of Winter Quarter the course was concluded with a documented essay on the student's definition of human nature and the effect of human nature upon the total structure of human society. Source material was drawn from the concepts of the existentialist philosophy, from the ideas of the nineteenth century naturalists, and from the views of cultural anthropologists whose works were used in the course.

Iconography of God. The Iconography of God study employed a filmed series by Houston Smith, philosopher of religion at Washington University, and a series of live lectures illustrating the development or lack of development of particular icons for each of the major religions. Three texts were used: Key Monuments of the History of Art by H. W. Janson, The Religions of Man by Houston Smith, and A Critique of Religion and Philosophy by Walter Kaufmann.

Behavioral Psychology. Israel Goldiamond of the Department of Psychology of Arizona State University presented five telephone lectures for the Behavioral Psychology course. These lectures were used in conjunction with the programmed textbook, The Analysis of Behavior, by Holland and Skinner. The students worked independently on the programmed textbooks and were required to pass unit examinations with ninety per cent accuracy.

Group II

The design for this project specified three primary treatments for the students in Group II. The first was a limiting of the number of assigned credit hours of course work for the students. The second was a required remedial studies program. The third was an intensive counseling program.

Credit Hours Limitation Treatment. The students in Group II were enrolled Fall Quarter for a maximum of nine hours in general education courses. Non-credit remedial work in such courses in the general university curriculum as English and mathematics was considered the equivalent of three credit hours. During the Winter and Spring Quarters classes were scheduled on the basis of specified grade average criteria.

Remedial Studies Treatment. The Remedial Studies Program was a three-quarter sequence designed to develop the basic knowledge, study, and examination skills necessary for successful academic experiences. No college credit was assigned for these courses. During the Fall Quarter Francis Robinson's Effective Study was used as the text for the remedial course.

Programmed instruction was introduced in the second course in the Remedial Studies Program for Group II. Pre- and posttests were administered for the programmed instruction in English and mathematics. A level of ninety per cent accuracy was required on all unit and program posttests for the programmed instruction materials.

Counseling Treatment. The emphasis in the counseling treatment was placed on discovering useful principles that would aid the educator in counseling students. The voluntary counseling in which these students participated was similar to the typical student-teacher conference. The students were required to take part in counseling for scheduling classes, in special conferences, and in group counseling sessions.

A group counseling program was created to satisfy the counseling treatment specified in the design. The group counseling sessions were labeled as "group seminars" as a precaution against the students' developing unfavorable attitudes toward the sessions.

The topics for the Fall Quarter were student-centered. The students were encouraged to discuss any experiences or problems they encountered. The staff attempted to direct and relate these topics to academic success in college. The topics for Winter Quarter counseling sessions were related to broad social issues. Some fifty possible topics were given to the students for their consideration, but the students were also free to select other topics. Spring Quarter topics were selected by individual groups.

Contact Hours. The average number of contact hours the Group II students had with the staff per quarter is listed in Table 2.

TABLE 2

AVERAGE NUMBER OF WEEKLY CONTACT HOURS PER QUARTER BETWEEN EFY AND UNIVERSITY STAFFS AND GROUP II STUDENTS

TREATMENTS	Fall	Winter	Spring
Remedial Studies	4	3	1.5
Counseling	1.5	1.5	.5
General Education Courses*	9	11.5	13.5
TOTAL	14.5	16.0	15.5

*These courses were taught by the regular University faculty.

Group III

The students in Group III served to control the Hawthorne effect in the study. These students were given the same pretest and posttest batteries that the students in Groups I and II experienced.

The students in Group III were enrolled in the regular general education courses offered by the University. Most of the students in this group were registered for twelve quarter hours of credit during the Fall Quarter. The number of hours for which the students in this group registered for Winter and Spring Quarters was determined by the University advisers and based on the criteria applied to regularly enrolled students.

Group IV

The Group IV students were admitted to the University in the Fall Quarter, 1962, and Winter Quarter, 1963, and served as an additional control group for the study. The students in Group IV were not aware they were participating in the project. The information used to compare the students in Group IV with the students in the experimental groups was obtained through the Registrar's Office.

Part III. Information, Results, and Conclusions

The information and data from the pre- and posttest questionnaires and the results and conclusions therefrom are considered here in two sections. The first section deals with data and information primarily normative or descriptive in nature; that is, it is data and information, principally from the pre-questionnaire, which relates biographical, attitudinal, and scholastic information that tends to describe the kind of persons enrolled in the EFY Program. Much of this information is recognizable as the kind that tends to show comparisons of the various divisions of the EFY sample population, divided either by groups or ACT classification or both.

The second section deals with data and information which can be interpreted as resulting, at least partially, from the effects of the student's experiences in the EFY Program. Of particular interest are those scholastic and attitudinal variables in which the various EFY groups exposed to different educational programs differ to a statistically significant degree. Some of these data will be construed to show direct results of EFY treatment; others will be inferred to be reactions to the EFY treatment.

The general plan of this report of information, results, and conclusions is to provide information in conclusion form and in lay language. In some cases where precision is deemed necessary, exact numbers, proportions, statistical significance levels attained, and exact phrasing of questions and/or answers are given, but many statements are left general.

Normative and Descriptive Data, Information, Results

Biographical Data. In the matters of age, high school graduation date, high school graduating class size, occupations of fathers, and occupations of mothers, there were no statistically significant differences among groups, between ACT High/Low classifications, or among combinations of both. By far the most prevalent age of EFY students was 18; a large majority had graduated from high school in June, 1962.

Similarly, there were no differences among the various groups on the highest level of formal education completed by either fathers or mothers of EFY students. For fathers: eight had completed seventh grade or less; 27 had completed eighth grade; 35 had had "some high school"; 55 had completed high school; 38 had had "some college"; 25 had completed college: nine had done "some graduate work"; 13 had acquired a master's degree; and five had attained a Ph.D. For mothers of EFY students: only three had completed seventh grade or less; 17 had completed eighth grade; 32 had had "some high school"; 95 had completed high school; 46 had had "some college"; four had graduated from college; four had acquired a master's degree and two had a Ph.D. Like the majority of other Southern Illinois University students, EFY students were largely first-generation college students.

There were no statistically significant differences in the number of siblings reported by EFY students; those in the ACT Low classification had more brothers, but the difference was not statistically significant. Likewise, there was no statistically significant difference between groups on numbers of brothers or sisters who attended Southern Illinois University before. There was a larger number of brothers and/or sisters of ACT Low's who attended college, significance being at only the .05 level, but there were more Low's and they had more brothers and/or sisters. Neither were there any statistically significant differences in the number of brothers and/or sisters of EFY students graduating from college.

Very few girls who have high achievement test scores and who are in the lowest third of their high school classes are interested in attending college. This accounts for the relatively small number of girls in the EFY Program (29) and the statistically significantly larger proportion of them (25) in the ACT Low classification.

Two facts of geographical location are corollary to each other. A statistically significantly larger proportion of persons in the ACT High classification were non-residents of Illinois; consequently, a significantly larger number of ACT High's reported living "over 400 miles" from Southern Illinois University. The first difference may be explained by the fact that persons with higher ACT scores have greater freedom to choose among available colleges, including those from another state; persons with low ACT scores must go to college where they will be accepted, usually in their home states. There were no differences among EFY groups in military status.

School-Related Data. There were no significant differences among EFY groups in the size of home towns from which EFY students came nor in the number of EFY students having friends from home attending Southern Illinois University. A large majority of EFY people reported having friends at Southern.

There was no pattern of differences in the number of EFY students applying to or having been accepted into other schools. Seventy-nine had applied to no other college; 51 had applied to one other; 51 had applied to two others; 13 had applied to three others; and 18 had applied to four or more others. Only 21 students reported being accepted by two other colleges, and 57 reported being accepted by one other school; 157 reported no other acceptances. These last presumably include those who applied to no other college for acceptance.

When asked on the posttest to check one answer from a list of items that best described their educational plans, EFY students replied thus: The largest number, 98, checked "will complete degree at SIU"; six checked "will continue at SIU but do not plan to graduate"; 39 checked "will complete degree at another school after more work here"; only five checked "have been accepted at another school for next fall and plan to complete degree there"; only six checked "will leave school at the end of this quarter"; only three checked "plan to transfer to VTI"; and 15 checked "other." There was a statistically significant difference between the proportions of High's and Low's checking "will complete degree at another school after more work here." The proportion favored the High's, who, as mentioned above, are more able to obtain acceptance in colleges elsewhere; but the two classifications differed only to the extent of 24 to 15, a relatively small absolute difference.

As groups, High's and Low's report having had different high school curricula. Sixty-five per cent of the High's but only 41 per cent of the Low's report having had a "college preparatory" curriculum. This difference was significant by the method of chi-square for independent measures at the .02 level of confidence.

There were no significant differences among EFY groups in numbers of hours reported spent in high school extracurricular and social activities. Only 18 reported spending more than 30 hours per week; 42 reported spending 20-30 hours per week; 56 reported spending 10-20 hours per week;

63 reported spending 5-10 hours per week; and 35 reported spending five hours or less per week in such activities.

There did not appear to be any real differences among EFY groups on who had most influenced them to apply for admission to Southern Illinois University. There were some statistically significant differences as computed by the chi-square method, but the values were greatly inflated by small numbers, the collapsing of cells, and many blanks. Also, the differences that were statistically significant were small absolute differences. However, a significantly greater proportion of the High's heard about the EFYP from the University Admissions Office; and a significantly greater proportion of the Low's heard about it from a "high school teacher, principal, or counselor." These findings were significant at the .01 and .001 levels, respectively. An examination of the selection procedures in Chapter III will reveal that the students in the High's and Low's were expected to learn about the program through the sources indicated in this finding.

When asked whether they had been able to form a strong favorable relationship with a teacher who was consistently interested in them and supported them before coming to Southern Illinois University, 130 EFY students reported that they had, and 84 reported they had not. There were no statistically significant differences among EFY groups.

The students were also asked whether they had been able to form a strong favorable relationship with a teacher interested in them and consistently supporting them since coming to Southern Illinois University. Again there were no statistically significant differences (SSD's) among groups; 47 said "yes," and 139 said "no" on the pretest answers, but in response to the same question on the posttest there was a statistically significantly larger proportion of Group I reporting "yes" than the other two groups. However, there were no statistically significant mean changes of groups from pre- to posttest.

The students were asked whether they had been able to form a strong favorable relationship with a staff member, other than a teacher, who consistently was interested in and supported them. There were no SSD's among groups on either pre- or posttest; 44 said "yes" and 169 said "no." Neither were there any significant changes from pre- to posttests.

There were no SSD's among EFY groups on grade point average attained in high school except for the category "C+." The proportions of the three groups reporting having attained a "C+" average differed slightly at the .05 level of significance, but the numbers were quite small and unimportant since a total of only 18 students in all three groups attained this average.

Few EFY students reported that they had roommates who were also in EFY, and almost all reported that their roommates had not been their friends before college. There were no SSD's among groups on these matters.

A number of questions about the living conditions of EFY students produced no SSD's. Examples are: asked whether they had cooking privileges, 92 reported "yes" and 120 reported "no"; asked whether they had an adequate place to study at their residence, 163 said "yes" and 48 said "no"; asked about the distance of their residence from campus, 59 reported living one-fourth mile or less away, 57 reported living one-half to one-fourth mile away, 43 reported living one-half to one mile away, 39 reported living one to two miles away, and two reported living two or more miles away; asked about modes of transportation used to get from residence to campus, most, 166, reported they walked; asked about how they solved the problem of getting their clothing washed, the vast majority reported washing their own either at their residence or at a laundromat; asked whether there were enforced study periods or rules in their residence, 109 said "yes," whereas 105 said "no," an indication that there were probably many with rules, enforced or not, but not necessarily with study periods; asked whether they felt that their living quarters had affected their academic performance, students showed a slight tendency toward the "much" end of the continuum, but no indication of whether the influence was for good or bad; asked whether adequate sleeping facilities were available to them at their residence, all but 18 reported there were; and asked whether they had changed residences during the year, 64 reported they had, and 111 reported they had not.

When asked what kind of housing they were living in, EFY students showed little, if any, difference. There was a statistically significantly larger proportion of ACT High's living in Small Group Housing than ACT Low's, but the absolute numbers involved were small and thus not very significant, 20/85 versus 10/132, significant at the .01 level. This ACT High/Low difference caused one significant difference at the .05 level of confidence in the six-way comparison, but this difference could hardly be influential. Both such significant differences had disappeared in time for the posttest questionnaire, even though a comparison of pre- and posttest answers to the questions revealed no statistically significant changes.

There were no differences nor any definite patterns among EFY groups in the reported number of other people living in the buildings in which they lived. The same was true on the posttest question, and there were no significant changes. The number of roommates reported by EFY students did not differ by EFY group on either pre- or posttest.

EFY students revealed a definite dissatisfaction with their housing. When asked on the pretest if they were "content" with their present housing, 140 replied "no," while only 61 replied "yes." There were no SSD's among EFY groups on this variable. Also, there were no statistically significant changes from pre- to posttest and no SSD's among groups on the posttest item. Although students as a group appear to have been "not content" with their housing, it is not known why or to what extent the discontent was felt.

The students' rooms appeared to be a popular place for studying. When asked where they "typically study," most indicated their room at their place of residence. When compared by groups on the pretest question, Groups II and III overwhelmingly preferred their rooms over Group I, the difference being significant at the .05 level; whereas Group I overwhelmingly preferred their Group I study space, difference being significant at the .001 level, although 30 Group I students indicated that they typically studied in their rooms. These significant differences disappeared by posttest questionnaire time, probably owing to the fact that during Fall Quarter, Group I students were required to spend a certain amount of time studying in their study offices, whereas the requirement was not in effect during the posttesting time.

The only statistically significant differences in eating habits among the groups concerned eating at the University Center Cafeteria. Statistically significant differences were: Low's most often ate supper there, 37/132 versus 11/85, significant at the .05 level; Group I ate lunch there more often than other groups, 17/66 versus 5/72 and 1/79, significant at the .001 level; Group I also ate supper there most often, 26/66 versus 6/72 and 16/79, significant at the .001 level; Group I Low's ate supper there most, significant at the .01 level, and also lunch, significant at the .01 level. These findings can be explained by the facts that (1) for Group I students, who attended classes exclusively in the University Center and had their laboratories and study space there, the University Center Cafeteria was by far the most convenient source for meals, and (2) since there were more Low's in Group I than High's, it would take a smaller proportion of Low's than of High's to be statistically significant.

When asked on the pretest whether they studied more than, less than, or about as much as the other persons in their residence, Group I students more often reported that the other students studied more. This finding was statistically significant at the .02 level and was based upon proportions of 26/66 versus 15/72 and 12/79. However, on the posttest it was Group II that reported a statistically significantly larger proportion of times that the other students in their residence studied more. Comment on this point is difficult, for it cannot be clear whether it was their perceptions of amounts of study, actual amounts of change in their study, or perceived or actual changed amounts of study among the "other" students in their residences that might account for the above SSD.

Several questions in both the pre- and posttest questionnaires asked for answers in the student's own words. These "open-ended" responses had to be scrutinized by content analysis methods and codified or classified into categories for punching onto IBM data cards for machine analysis. The categories for these answers, together with their definitions and examples, are included in the appendix of this volume.

One such open-ended question on the pretest asked the students why they "came to college." After the answers were classified and analyzed for SSD's among groups, it was found that the groups did not differ. A large majority, 153/218, of the answers fell into the "Standard, probably most socially acceptable" category (see Appendix C). Several reasons were given by most students for attending college, and the second most prevalent reason given was "reason of a professional or a vocational nature," with 130 responses falling into that category. Answers to the same question on the posttest questionnaire had about the same proportions in each of these categories.

Several questions on both the pre- and posttest questionnaires asked for reasons why the student felt he did poorly in school or why he expected to do well, or poorly, in school in the future. The same categories of answers were used for all these questions (see Appendix D for the categories, their definitions, and some examples of each). To all questions of this nature, the most prevalent response category, and the response category utilized by a majority of EFY students for every such question, was the "honest" response classification, or the response "crediting or blaming of self" for success or failure. For example, when asked on the pretest why they did not do well in high school, 175 of 218 "blamed themselves" for lack of study, work, and motivation. When asked on the pretest, "If you think you are going to do well in college, tell us why," 140 of 218 indicated it was "up to themselves"; the next largest category, 39, was the number of answer spaces left blank. When asked on the posttest why they had not done well in high school, 103 "blamed themselves," and there were 77 blank answers; in response to "If you feel you are going to do well in college, tell us why," 101 responded that their own work would make the difference and there were 33 blanks.

When EFY students were asked in the pretest questionnaire to report the amount of their participation in social activities, the answers showed a definite regression toward the mean, with no SSD's among groups. This same tendency was found in answers to the same question on the posttest questionnaire. There were no statistically significant changes and no SSD's on the posttest among groups.

There were no SSD's among EFY groups on answers to the question about whether they expected to work during their freshman year; 63 said they did expect to work, while 145 said they did not. When asked on the posttest whether they planned to work during the sophomore year, EFY groups gave about the same proportion of replies, with no SSD's among groups and no significant changes.

When asked on the pretest questionnaire whether and how much they were working at that time, 198 of the EFY students replied "none." Answers on the posttest did not change significantly, nor were there SSD's among groups on either pre- or posttests. Apparently fewer EFY students worked than the number who had expected to work during the year, but the reason for the smaller number cannot be determined.

Three questions regarding financial and material aspects of their lives drew consistent responses from the EFY students. When asked on the pretest whether they received financial assistance while attending college, 155 said "yes" and 55 answered "no." There were no statistically significant differences among groups, nor was there any significant change in answers to the same question on the posttest questionnaire. When asked on the pretest whether they had any "financial problems," 156 said "no" and 55, presumably the same 55 who received no financial assistance, said "yes." Again there were no SSD's among groups, nor any significant changes in answers to the same question on the posttest questionnaire. Another pretest question asked EFY students to respond, on the five-step scale, as to the extent they felt they had those material things, such as spending money, car, and clothes, they needed to be happy. Few reported "much more needed," the extreme low end of the scale; 98 reported "have all I need," the extreme high end of the scale. Again, there were no SSD's among groups, and no significant changes on the answers to the posttest question.

On the posttest questionnaire, EFY students were twice asked to predict their prospective grade point averages, once for Spring Quarter, 1963, and once for overall grade point average after Spring Quarter. There were no SSD's among groups, and the responses clustered tightly around a mean of just over 3.0.

EFY students were asked on both the pre- and posttest questionnaires whether they thought students in the lowest third of their high school class should go to college. There were no SSD's among groups either time. It is interesting to note that, even though students from the lowest one-third of their high school classes typically do not do well, very few EFY students answered "no" to the question. On the pretest 171 answered "yes," and 40 checked "no reaction," while only one answered "no."

When asked on the pretest how many non-credit organized campus activities they participated in, only one student reported participating in six or seven such activities, nine reported participating in four or five, 53 reported participating in two or three, and 111 reported participating in one. Although no space was provided to check "none," it might be assumed that the 45 people not answering at all participated in none. There were no SSD's among EFY groups.

Interaction with Parents. EFY students were asked to respond on five-step scales going from "little" to "much" to show the amount they participated in various activities with their parents. They were requested to rate their participation with their parents in religious, recreational, cultural, intellectual, and social activities on both the pre- and posttest questionnaires. There were no SSD's among groups on either the pre- or posttest versions, with the exception of one in religious activities. The pretest revealed no SSD's among groups, but the posttest showed that those in the ACT Low classification reported a mean level of participation in religious activities which was statistically significantly higher than that reported by the ACT High students. The difference was between mean responses of 2.82 for the High's and 3.43 for the Low's and was significant at the .01 level of confidence. The difference is difficult to account for unless it is considered a chance occurrence, a possibility, since chance occurrence could be one out of 100 findings at the .01 level of confidence. However, the difference probably is part of an overall trend of change noted between pretest and posttest administrations, a change toward more participation with parents in all the kinds of activities. Many statistically significant mean changes occurred from pre- to posttest. For social activities the following changes were noted: Low's increased from 2.722 to 3.074, significant at the .01 level of confidence; Group II Low's increased from 2.628 to 3.142, significant at the .05 level; Group II as a whole increased from 2.688 to 3.059, significant at the .05 level; Group III as a whole increased from 2.698 to 2.984, significant at the .05 level; and all EFY students as a group increased from 2.707 to 2.966, significant at the .01 level. Slight but significant mean increases in participation with parents in intellectual activities were reported also: Group II Low's showed a mean increase from 2.828 to 3.171, significant at the .05 level; all EFY students as a group changed from 2.961 to 3.144, significant at the .05 level. Slight, but significant, mean increases in participation with parents in cultural activities were: an increase from 2.883 to 3.127, significant at the .02 level, for all EFY students as a group; and an increase from 2.883 to 3.127, significant at the .05 level, for all Low's. Reported mean changes in participation with parents in recreational activities are: an increase from 3.120 to 3.388, significant at the .05 level, for all Low's; and an increase from 3.172 to 3.361, significant at the .05 level, for all EFY students as a group. The tendency toward reporting more participation with parents in activities so varied as these suggests that, even though the students probably did not see their parents as often because they were away from home most of the time, students felt that, when they were home, they participated more fully or more "richly" with their parents. Perhaps the maturity resulting from a year of college or simply a year of age is responsible.

One other statistically significant change reported should be mentioned; this is the largest absolute change reported in this category. Group II reported a mean increase in participation with parents in religious activities from 3.066 to 3.500, significant at the .01 level of confidence. No reason or rationale for this change can be inferred.

Self-Evaluation. One major conclusion to be inferred from the data secured in this questionnaire study is that there is further evidence that low achievers tend to report inflated proportions when asked to rate their own ability or achievement. For example, as early as 1938 Clark found that low ability students tended to assign themselves grades higher than those assigned by the teacher, whereas high ability students tended to assign themselves grades about the same or somewhat lower than grades assigned by the teacher. Corollary conclusions were made by Gruner (1956) about high school debaters. He found that the more experienced and the more proficient debaters more accurately rated themselves and their opponents, and more often predicted accurately whether they had won or lost a debate; less experienced and less proficient debaters tended to overrate themselves and overestimate the number of their victories. No less than thirteen items on the pretest questionnaire indicate that the low achievers in the EFY population were highly reluctant to report themselves as less than average in ability or achievement potential. There were only two exceptions, which are discussed after the ten items showing inflated self-judgments are considered.

It is a fairly well established conclusion that students' grades tend to predict future grades (Juola, 1964). In fact, high school grades are such a useful factor in predicting college grades that the American College Testing Service, by combining high school grades with ACT scores, adds significantly to ability of the ACT to predict college grades (ACT Program, 1963). However, when the EFY students were asked if their high school records were accurate indications of "what they could do," 200 replied "no"; only 11 replied "yes." There were no SSD's among EFY groups on replies to this question, and there were no significant changes from pre- to posttest.

When EFY students were asked to indicate how much faith they had in their "ability to do things well in general," on a five-step scale from "very little faith in my ability" to "considerable faith in my ability," only 21, or 9.8 per cent, rated themselves below 3, or "average"; 41, or 19.2 per cent, rated themselves at 3; 86, or 40.2 per cent, rated themselves at 4; and 66, or 30.8 per cent, rated themselves at 5, "considerable faith in my ability." Group III students, as compared with those in Groups I and II, indicated greater faith in their ability, a result statistically significant at the .01 level of confidence, a t of 2.85, although that difference disappeared in the answers to the same question on the posttest. There was one statistically significant change that is discussed in the next section.

When asked to rate themselves "as persons" as compared to other people, 161 EFY students, or 75 per cent, rated themselves "about as good as other people"; 16, or 7.5 per cent, rated themselves "one of the best"; and 20, or 9.4 per cent, rated themselves "better than most people." However, only 15, or 7.0 per cent, rated themselves "inadequate compared to others," and just one, .5 per cent, rated himself "one of the less adequate." There were no SSD's among groups and no significant changes between pre- and posttest answers to the same question.

The five-step scale was used as the answer format to the question, "Indicate the extent to which you feel you are successful in doing what you set out to do." In answer, 76 students, or 35.3 per cent, checked 3, or "average"; 113, or 52.6 per cent, checked 4; 8, or 3.8 per cent, checked 5, indicating "always successful"; but only 18, or 8.4 per cent, checked 2, "below average," and not one student checked 1, "never successful." There were no SSD's among groups on the answers to the question on either the pre- or posttest questionnaires; there were two significant increases from pre- to posttest items that are discussed in the next section.

When asked if they wanted to complete college "now that they are here," 203 EFY students replied "yes," and none replied "no." There were no SSD's among groups, and no changes from pre- to posttests. Very few students were very pessimistic about completing college. When asked, "Do you really think you will finish your degree?" 135 said "yes"; 69 replied "maybe"; but only 10 replied "no." Group II responded with a larger proportion of "maybe" responses, but the difference was statistically significant at only the .05 level of confidence. The difference disappeared on the posttest item, although there were no statistically significant changes.

The EFY students were asked, "Do you believe people should always do what they say they are going to do?" The assumption was that an answer to this question should reveal how they felt about what they themselves would do in the situation. If the assumption is correct, the fact that 152, or 71.7 per cent, replied "yes" would indicate that they had great faith in their own dependability, a trait one could not expect to find so universally in low achievers. There were no SSD's among EFY groups, nor were there any significant changes between pre- and posttests.

Pretest item 58 asked EFY students how they felt about the thoroughness with which they did most activities in which they were engaged, activities such as work, school, and hobby projects. Sixty-four, or 30.6 per cent, reported: "I try to do everything as well as I can whether I like the work or not"; 125, or 59.8 per cent, answered: "I like to do a good job in those things I enjoy and at least finish the other things"; only 15, or 7.2 per cent, reported: "Getting the thing done is most important to me"; only 3, or 1.4 per cent, answered: "I think it is important to finish only the things I like"; and only 2 persons, or .96 per cent, answered: "I never get to do things I want to do, and so I just do things halfway." The only statistically significant difference among EFY groups on either the pre- or posttest item answers was that the ACT Low's report a significantly larger number of times the most socially acceptable answer, "I try to do everything as well as I can whether I like the work or not." It may be a function of the lesser ability as evidenced by ACT score that increases the discrepancy between elicited verbal response and actual achievement.

Pretest item 44 asked, "If you and a number of other people worked on a project for the same length of time, would you probably (1) accomplish more than anyone else, (2) accomplish more than most of the others, (3) accomplish about the same amount as the average person, or (4) accomplish less than most of the others?" One hundred thirty-six, or 63.6 per cent, checked answer 3; 57, or 26.6 per cent, checked answer 2; 8, or 3.7 per cent, checked answer 1; and only 13, or 6.1 per cent, checked answer 4. There were no SSD's among EFY groups on these answers, nor were there any significant changes from pre- to posttest answers.

Pretest item 40 asked, "How do you feel when you fail to do what you have told someone you will do?" One hundred seventy-six EFY students, or 82.2 per cent, answered by checking, "I feel obligated to give them an explanation and immediately do so." Of the total, 29, or 13.6 per cent, replied with, "I want to explain but generally never have the chance." Only 7, or 3.3 per cent, answered with, "I feel they won't worry about it."

Only 2, or .9 per cent, answered, "I never think about it afterward." There were no SSD's among EFY groups nor any significant changes between pre- and posttest answers.

The five-step scale was used as the answer format for the question, "Indicate how hard you usually work to reach the goals you set." The extremes went from "not very hard," step 1, to "just as hard as is necessary to reach my goals," step 5. Forty-three students, or 20 per cent, checked step 3, the "in-between" or "average" step; 74, or 34.4 per cent, checked step 4; 73, or 34.0 per cent, checked step 5; but only 19, or 8.8 per cent, checked step 2, "below average"; and only 6, or 2.8 per cent, checked step 1. There were no SSD's among the EFY groups and no significant changes from pre- to posttest answers.

The same five-step scale was used for pretest item 79, "Indicate the extent to which you are a capable, productive student," with step 1 representing "not productive or capable" and step 5 representing "very productive and capable." Seventy, or 32.7 per cent, answered with step 3; 99, or 46.3 per cent, answered with step 4; and 34, or 15.9 per cent, answered with step 5; but only 10 students, or 4.7 per cent, answered with step 2; and only one answered with step 1. There were no SSD's among EFY groups nor any significant changes between pre- and posttest answers.

These are the instances in which it appears that the EFY population was less than completely objective about its abilities and attitudes. Two exceptions to the prevailing trend were mentioned, one of which has already been considered in these pages: the fact that, when asked why they did not do well in school or why they expect to do well, or poorly, in school in the future, the students "honestly" tended to blame or credit themselves. The other is the fact that, when asked whether they felt they had mastered the skills of learning, the tendency was to report, on a five-step scale from "barely mastered skills" to "completely mastered skills," an average-to-below-average mastery. The breakdown by steps was: 25, or 11.7 per cent, checked step 1; 54, or 25.4 per cent, checked step 2; 98, or 46.0 per cent, checked step 3; 34, or 16.0 per cent, checked step 4; and only 2, or .9 per cent, checked step 5. There were no SSD's among EFY groups on either pre- or posttest answers; however, there were statistically significant changes which are discussed in the second section.

The above two answer distributions seem to run counter to the general trend which this paper concludes exists, but actually the adverse findings, when properly interpreted, complement that trend toward self-generosity.

Scattered throughout the "open-end" question responses are confessions, or appeals, that the students never learned "how to study" or never attained "proper study habits " or never mastered "how to take notes " and "reading with comprehension." In other words, there is a tendency for these low under-achievers to rationalize that they have an average-to-above-average potential and that they really could do things well under the right circumstances, if only they had learned earlier some rather mechanical sort of habits or skills.

In terms of Festinger's theory of cognitive dissonance (Festinger, 1957), the hypothesis above has at least theoretical support. Also, these findings resemble those of Borislow (1963), who found that under-achievers rate themselves as high on a "general self" measure as do achievers, but rate themselves pessimistically on a "student self" measure. Since there appears to be no other explanation for the data and since previous work has shown this tendency toward self-generosity in low achievers, the writers accept the above explanation until a better one becomes available.

Miscellaneous

Miscellaneous Academic Attitudes. When asked whether they had generally enjoyed school before coming to Southern Illinois University, the majority of students, 166, reported that they had. There were no SSD's among EFY groups on this matter, nor were there significant changes from pre- to posttest answers. The number of students reporting they enjoyed school increased when the students were asked if they had enjoyed school since coming to Southern Illinois University. The majority here was 192. There were no SSD's among EFY groups on this variable, nor any significant changes from pre- to posttest answers. Another item, number 64, asked "at what point" in their formal education the EFY students had stopped enjoying school. Very few indicated just when they had stopped, since 132 wrote in that they had never stopped. Again, there were no SSD's among groups on answers to this question nor any significant change between pre- and posttest answers.

Students were asked to respond on a five-step scale from "inconsistent" to "highly consistent" to the question, "To what extent do you feel that the educational aims and objectives at Southern Illinois University are consistent with yours?" The general response was toward the "positive" or high end. Seventy, or 32.6 per cent, checked step 3; 83, or 38.6 per cent, checked step 4; 40, or 18.6 per cent, checked step 5; but only 15, or 7.0 per cent, checked step 2; and only 7, or 3.3 per cent, checked step 1, the lowest. There were no SSD's among groups on the pretest, but a statistically significant difference appeared in the posttest, the difference showing that Group I students felt that Southern Illinois University's goals were consistent with their own more so than did Group III students. The difference was caused not by an increase in the feeling of consistency in Group I, but by a decrease in such feeling in Group III.

When asked on the pretest to respond on a five-step scale as to how highly they regarded Southern Illinois University as an institution of higher education, the students gave answers which were generally favorable. Seventy-seven, or 36.2 per cent, checked step 3; 70, or 32.9 per cent, checked step 4; 47, or 22.1 per cent, checked step 5; only 16, or 7.5 per cent, checked step 2; and only 3, or 1.4 per cent, checked step 1. There were no SSD's among groups on the pre- or posttest item answers, but general declines marked by statistically significant changes from pre- to posttest responses indicated a general lowering of the EFY students' esteem for Southern Illinois University's standing as an institution of higher education. The decline is so general as to indicate that the old maxim, "familiarity breeds contempt," has application beyond the realm of personal relationships. The statistically significant changes are discussed in more detail in the next section of this report.

Three questions asked of EFY students were concerned with which alternative EFY students would choose, when given a choice between fewer hours credit with a higher grade and more hours credit but with a lower grade. Given a choice of five hours of A versus eight hours of B, 104 chose the A hours, and 110 chose the B hours. Given the choice of six hours of A versus ten hours of C, 160 chose the A hours, and 45 chose the C hours. Given the choice of six hours of A or seven hours of B, 171 took the A hours, and only 43 took the B hours. There were no SSD's among EFY groups on answers to these questions nor any significant changes from pre- to posttest items.

Personal Relations with Others. When asked if they "generally trust other people," 146 of the EFY students answered in the "above average" categories of the five-step scale. There were no SSD's among groups nor any significant changes from pre- to posttest items.

When asked if other people usually "measure up" to their expectations, EFY students generally indicated that they do. Most, 127, indicated that people "measured up" to their expectations "most of the time," and 57 indicated that people measured up to their expectations "some of the time." There were no SSD's among the groups nor any significant changes from pre- to posttest items.

Answers showed a definite regression toward the mean on the five-step answer scale when students were asked how much they rely upon others to tell them how well or poorly they have performed. There were no SSD's among EFY groups nor any significant change from pre- to posttest items.

Students' answers also showed a definite regression toward the mean on the five-step answer scale when students were asked the extent to which they "let people know" when they are mad, unhappy, or worried. There were no SSD's among EFY groups nor any significant change from pre- to posttest items.

EFY students showed a general tendency to want to "be on their own." When asked to what extent they like being on their own, 34 checked "all of the time"; 125 checked "most of the time"; 38 checked "some of the time"; only one checked "very little of the time"; and 38 checked "no reaction." There were no SSD's among EFY groups nor any significant changes from pre- to posttest items.

When the EFY students were asked to what extent they request help with decision-making, there was a statistically significant difference between ACT High's and Low's, the difference indicating that the High's tend to ask for more help. The absolute mean difference was small, and both means, means of 1.22 and 1.05, were toward the extreme low end of the scale and so might have little absolute significance. The difference disappears on the posttest item. From pre- to posttest items there occurred a statistically significant mean change which is discussed in the next section.

When students were asked to what extent they discuss their personal problems with others, no definite pattern of answers was clear. There were also no SSD's among groups nor significant changes from pre- to posttest items.

Future Plans. When EFY students were asked to identify their proposed major field at college, no definite pattern of answers resulted. There were also no SSD's among groups nor any significant changes from pre- to posttest items.

The EFY students were asked to use their own words to tell what they wanted to be doing ten years hence. Their answers were classified on a five-step scale of specificity in order to determine how specific their ten-year occupational goals were. The descriptions and examples of specificity categories are to be found in Appendix E. No definite pattern of goal specificity appeared in the answers given, and there were no SSD's among groups nor any significant changes from pre- to posttest items.

When asked what kind of goals they set for themselves, in terms of length of time required to attain them, 49 EFY students checked "goals I can attain right away"; 42 checked "goals I can attain in a month or two"; 32 checked "goals I can attain within one year"; and 84 checked "goals which may take many years to attain." There were no SSD's among groups nor any significant changes from pre- or posttest items.

Leader-Follower Roles. When asked to respond to separate items about the extent to which they felt they act as a leader and as a follower, EFY students answered in such a way as to show that they tended to perceive themselves more as leaders than as followers. Responses were indicated on the five-step scale. On the "act as leader" scale from 1, indicating "almost never," to 5, indicating "almost always," only 18 checked step 1; only 23 checked step 2; 71 checked step 3; 84, a plurality, checked step 4; and 18 checked step 5. On the "act as follower" scale only 14 checked step 5; 44 checked step 4; 76 checked step 3; 61 checked step 2; and 18 checked step 1.

Additional Information on EFY Students' Parents. There were no SSD's among groups on the marital status of the parents or guardians of the EFY students. The majority were married. There were no significant changes from pre- to posttest items.

Almost without exception, EFY students accorded both mothers and fathers high "scores" on their performances as parents. The students were asked to rate both mothers and fathers on the five-step scale. There were no differences among groups on either item and no significant changes from pre- to posttest items.

Asked whether both parents work, 88 EFY students reported "yes," and 114 reported "no." There were no SSD's among EFY groups nor any significant changes from pre- to posttest items.

When EFY students were asked to what extent they thought their parents wanted them to graduate from college, the tendency was to report strong desire in both parents for their child to graduate. There were no SSD's among EFY groups nor any significant changes from pre- to posttest items.

Summary. Generally the data tends to show that there are few statistically significant differences among the EFY classifications on the biographical and attitudinal items of a normative or descriptive nature. Even where statistically significant differences do occur, the differences are seldom substantial. This general lack of difference is interpreted as indicating that the EFY classifications are, for the purpose of division for experimental manipulation, essentially equal. Any small statistically significant difference shown among the various groups is taken as a real but unimportant difference among the classifications so specified, and is not interpreted as a result of the experimental treatment briefly outlined in the first part of this chapter.

The next page begins a section dealing with differences and changes from pre- to posttest responses. These differences and changes, both significant and not significant, and both substantial and small, are interpreted by the EFY staff to be results of the experimental treatment of 1962-1963. There are some instances of lack of difference where some difference had been expected. These are discussed accordingly.

Changes and Differences Ascribed to EFYP Treatment

This section discusses changes by groups and sub-groups from pre- to posttest questionnaire items and differences among groups and sub-groups on responses to pre- and posttest items, differences which seem attributable to the different treatments the groups and sub-groups received during the Experimental Freshman Year. The changes and differences are considered attributable to the treatment on the basis that, statistically, these various groups and sub-groups were considered "equal" before the EFY began; therefore, any changes or differences can be ascribed to the one major aspect of their environment that differed from group to group.

This section is divided into two sub-sections. The first elaborates upon responses to items designed to elicit reactions to and evaluations of the EFY Program. The second discusses the responses to items reflecting differences and/or changes in student attitudes toward Southern Illinois University and toward themselves; this section also includes some descriptive data showing the relation of the differences to the treatment.

Reactions to and Evaluations of the EFY Program

The reactions to and evaluations of the EFY Program are divided here into those concerning the academic aspects of the program other than the staff, and those reactions to and evaluations of the EFY staff.

Reactions to and Evaluations of the Academic Aspects of the EFYP. Staff members of the EFYP generally agreed that the Group I students received the most intellectually invigorating and the most emotionally satisfying educational treatment of the three groups. The staff generally agreed subjectively that Group II students developed more negative attitudes toward their own program because of the many hours they were required to put in on such non-credit activities as programmed instruction and group counseling. The staff also felt that Group III remained mostly "neutral" toward the EFYP except for some negative reactions to the rigorous batteries of tests they had taken, but for which they had received no credit. Results from the items on the questionnaires designed to tap the affective responses toward the EFYP generally confirmed these subjective conclusions.

EFY students were asked to respond on a five-step scale going from "dislike" to "like very much" about how they felt toward the educational program in which they were then involved. The Group I mean response was higher than that of Group II, 3.67 versus 3.17, a difference statistically significant at the .05 level, and higher than Group III's mean response, 3.67 versus 3.03, a difference statistically significant at the .01 level. The only group to show a statistically significant change from pre- to posttest items was Group I, which, as a group, increased in its favorable evaluation of its educational program. The increase was from 3.67 to 4.33, significant at the .01 level. Only eight students in the group of 56 reported a decline in liking for their program; 30 of the 56 remained the same; and 18 increased with 11 of these increasing by two steps on the scale. Group II decreased somewhat, though not to a statistically significant extent. As a result of the increased liking by Group I for their educational program, differences between mean responses of Group I and Group II and between Group I and Group III occurred; both differences were statistically significant at the .01 level of confidence.

When asked on the posttest questionnaire which group they would have preferred had they been given a choice at the beginning of the year, the students in each group tended to show a preference for their own groups. Group I showed this tendency more strongly than did the other two groups, however, and Group III showed it more strongly than did Group II, which, as previously mentioned, was considered subjectively to be the group least satisfied with the program. It is interesting to note that a greater proportion of the ACT High's reported they would have preferred not being in any EFY group than did ACT Low's, significance being at the .05 level. It may be that the ACT High's felt less dependent than the Low's upon their acceptance of the EFY Program as a prerequisite for acceptance into college.

When asked if they felt that the EFY Program should be continued in the future, a larger proportion of Group II students answered "no" than did students in the other two groups, this difference being statistically significant at the .01 level. Group II students' greater reluctance to see the EFYP continue is interpreted as an expression of negative attitude toward the program.

One question may have been a unique type of attitude measurement. On both the pre- and posttest questionnaires the EFY students were asked to respond on the five-step scale as to how they thought the other EFY students felt toward the EFY Program, the steps going from "unfavorable" to "favorable toward." The assumption underlying the use of this question was that, by stating how he thought the others in the program felt about it, an EFY student would, by the process of projection, report his own verbal attitudes as well as a sampling of spontaneous verbal attitudes perceived among those with whom he most closely associated, those being the people in his own group. In other words, a person is probably more likely to think and to report that his peers favor what he favors and dislike what he dislikes rather than vice versa, if for no other reason than for "wishful thinking" or "rationalizing." It is felt that responses to this item tend to confirm the theory in this instance.

There were no statistically significant differences among groups on the pretest item. On the posttest item, however, after the experience of one year, Group I and Group III exhibited a statistically significant difference from Group II. The mean response of Group I was 3.52, whereas Group II's response was "below average" at 2.74, and a $\underline{t}$ test for unrelated measures showed the difference between the two means to be statistically significant at the .01 level. Group III's mean response was 3.25, different from Group II's mean response at that same level of confidence.

There were also some significant changes from pre- to posttest items. As might be expected from the preceding data, the largest and most statistically significant change was that of Group II. This group shifted from 3.36, on the "favorable" end, to 2.74, on the "unfavorable" end, a difference significant at the .001 level of confidence. The ACT High students, as a group, shifted down, from 3.20 to 2.83, a change significant at the .01 level, but this difference was largely influenced by High's from Group II. Fully half the High's who shifted down one full step were from Group II, and half the High's shifting down two full steps were also from Group II. From whatever direction the data is viewed, therefore, it appears that Group II students declined more in their opinion of how others felt about the EFYP, and, presumably, therefore, of how they themselves felt about it. This presumption that judgment of the attitude of one's peers is affected by and, therefore, reveals one's own attitude, bears further investigation, of course. But it should be noted here that other studies of personality and perception lend validity to the theory that persons project their own attitudes when describing those of other people (Breed and Ktsanes, 1961; Byrne and Blaylock, 1963; Fiedler, et al., 1952; Gorden, 1952; Manis, 1960; Smith, 1958; Vroom, 1959; and Wallen, 1943).

The differences in responses to two items offer possible reasons for the difference in affective responses of the groups toward the EFYP.

When asked to indicate on the five-step scale to what extent they "felt a part of the Experimental Freshman Year Program this year," Group I felt "more a part" than did either Groups II or III, and Group II felt so more than did Group III. The mean responses for the three groups were: Group I, 4.40; Group II, 3.52; and Group III, 2.38. The differences between groups were all statistically significant at the .01 level of confidence.

Compared to Group I, Group II expressed significantly more desire, on the five-step scale, for a wider choice of subjects during EFY than they had been allowed. The mean responses, 4.20 and 3.71, were statistically significantly different at the .01 level. This is interpreted as reflecting Group II's greater dissatisfaction with the courses they had had and with the regimentation of their schedule.

On the posttest questionnaire all EFY students were asked to express in their own words any change they would like to see in the EFY Program, if it were to continue. The suggested changes, 99 altogether, were analyzed for any possible patterns of suggestion, but none were discovered. One hundred seventeen EFY students suggested no changes. There were no proportional differences among groups as to whether changes were recommended.

It is interesting to note that EFY students generally felt that they had neither too much nor too little outside work assigned them. There were no differences among groups on responses to an item asking them about this, and the answers showed a strong tendency for responses to regress toward the mean.

Asked whether they felt that too much time had been spent in class for the amount of material to be learned in the courses they had taken, 49 EFY students answered "yes" and 120 answered "no." There were no SSD's among groups.

When asked whether they felt that more class discussion would have helped them to learn better the subject matter of their courses, both Group II and Group III responded more positively than did Group I. However, the absolute differences were small, and a t test showed significances of only .05 and .02 respectively. The more conservative chi-square revealed no significant differences and showed a tendency for responses to regress toward the mean.

Reactions to and Evaluations of EFY Staff Members. Compared with Groups II and III, Group I generally reacted more favorably toward the EFY staff members; moreover, Group II, as compared with Group III, generally expressed a more favorable reaction toward EFY staff members. The EFY staff members expected these results since their subjective impressions were that Group I had had more opportunity for satisfying relations with the staff than had Group II and that Groups I and II had had a great deal more interaction with the staff than had Group III.

When asked to check on the five-step scale the extent to which they felt that the EFY staff was "concerned" with their being successful in college, Group I's mean response was 4.71; Group II's was 4.44; and Group III's was 4.08. The difference between mean responses of Group I and Group II was significant at the .02 level of confidence; that between Group I and Group III at the .01 level; and that between Group II and Group III at the .05 level.

When EFY students were asked to check on the five-step scale the extent to which they felt that the EFY staff was expending effort to make them successful in college, the differences were even more substantial. The mean responses were: Group I, 4.79; Group II, 4.38; and Group III, 3.20. The differences between I and II, between II and III, and between I and III were all significant at the .01 level of confidence.

Questions asking the extent to which EFY students felt they received (1) personal assistance with course work, (2) assistance with their personal problems, and (3) personal attention from the EFY staff members elicited responses on the five-step scale showing clearly why the above statistically significant differences occurred in the categories, "concern for" and "effort expended in causing" their success in college. The mean responses for "personal assistance with course work" were: Group I, 4.00; Group II, 3.39; and Group III, 2.90. Those for "assistance with personal problems" were: Group I, 4.00; Group II, 2.90; and Group III, 1.90. Those for "personal attention" from EFY staff members were: Group I, 4.19; Group II, 3.23; and Group III, 2.92. Each difference between any two groups on any one concept, with the exception of that between II and III on "personal attention," was statistically significant at the .01 level of confidence.

The posttest questionnaire asked the people in Groups I and II to rate, on a five-step scale ranging from "ineffective" to "highly effective," their individual EFY instructors. A rating of 1 was lowest; a rating of 5 was highest. The following mean ratings were awarded by Group I:

H. Cohen	4.88
M. Cohen	4.42
D. Glickman	4.42
H. Cotton	3.65
A. Warner	2.67

Group II rated Mrs. Lutz at a mean of 3.78, Mrs. Bumgartner at a mean of 4.02, and Miss Bleem at a mean of 3.84.

Item 81 of the posttest questionnaire asked whether the EFY students felt that more or less personal interaction with their EFY instructors would have helped them to master the subject matter of their courses. On the five-step scale from step 1, "preferred less interaction," to step 5, "preferred more personal interaction," Group I differed significantly in its mean response from Group II. Group I's mean was 3.53 as compared with Group II's mean of 3.17, a difference significant at the .02 level of confidence. This would seem to indicate that Group I felt more strongly that their experience of greater personal interaction with EFY staff members had been beneficial in their learning the subject matter of their course.

Attitudinal and Normative Differences Resulting from Experimental Treatments

Descriptive Data. Group I students, in general, carried more hours than did Groups II and III in all three quarters of the Experimental Freshman Year. Group III carried significantly more hours the first term, Fall, 1962, and the second term, Winter, 1963, than did Group II, but slightly fewer the third term, Spring, 1963. Average number of hours carried for Fall Term, 1962, were: Group I, 14.21; Group II, 7.62; Group III, 11.21. All these differences were statistically significant at the .01 level of confidence. Winter Term, 1963, credit hour averages were: Group I, 16.44; Group II, 12.13; Group III, 13.48. All these differences were statistically significant at the .01 level of confidence. In Spring Term, 1963, the average number of hours carried were: Group I, 16.90; Group II, 13.38; Group III, 13.03. Group I differed from Group II and Group III to a statistically significant degree, .01 level of confidence, but Group II did not differ from Group III.

The above figures and statistical significances are due primarily to the policy of purposely minimizing the number of hours Group II was allowed to carry, plus allotting the full load of credit hours to the Group I people. The greater number of Group III students on probation in Spring, 1963, probably accounted for their reduced number of hours per person during the third quarter.

All three groups seem to have been fairly content with the number of hours they carried in each of the three quarters. When the EFY students were asked to indicate the number of hours they would like to have taken each of the past three quarters, the responses were found to parallel accurately the number of hours actually taken, with the resulting paralleling of significant differences between groups as indicated above.

As noted earlier, there had been no significant differences on the pretest between proportions of the different EFY groups reporting that they had been able to form a strong favorable relationship with a teacher who was consistently interested in them and who supported them since they had come to Southern Illinois University. On the posttest, however, a chi-square analysis reveals that a statistically significantly greater number of Group I students reported having formed such an attachment, and a significantly greater proportion of Group II and Group III people reported not having formed such an attachment. The former difference was significant at the .01 level of confidence, the latter at the .05 level. This difference in being able to form at least one such relationship on the part of Group I people may be part of the reason for their more favorable evaluation of and reaction to the experience and staff of the EFYP.

Reactions to Southern Illinois University as a Result of the EFY. As mentioned in the first section of these results and conclusions, the image of Southern Illinois University as an institution of higher education generally lessened in stature during the EFY; this lessening of esteem is evidenced by changes in responses to that item from pre- to posttests. Significant mean changes from pre- to posttests are listed below, together with the levels of confidence of the differences, as determined by the t test for related measures.

Group	Changes from pre- to posttest	Levels of confidence
All EFY	3.70 to 3.31	.001
Group I	3.73 to 3.39	.02
Group II	3.68 to 3.16	.01
Group III	3.70 to 3.28	.01

Also, there were statistically significant declines in the feeling that Southern Illinois University's aims and objectives were consistent with those of the EFY students; these declines were measured by the t test for related measures as applied to the differences in mean responses to the pre- and posttest items on that concept. Although the mean of all EFY responses declines from 3.657 to 3.524, significant at the .02 level, the change seems mostly triggered by a marked decline in Group III, a decline from 3.74 to 3.30, significant at the .02 level, and especially by the Group III Low's, which declined from 3.86 to 3.14, significant at the .01 level. Group II declined, also, though not to a statistically significant degree. Its decline showed up, however, in the comparison of groups for statistically significant difference on the posttest response. Here, although there were no SSD's among groups on the pretest responses, Group I's mean response was higher than either Group II's or Group III's responses, significance being at the .01 level of confidence. Group I's responses did not change from pre- to posttest, but the difference is attributable to the decline in the other groups.

Differences and Changes in EFY Students' Self-Perceptions. There were several statistically significant changes from pre- to posttest and some statistically significant differences among groups on the posttest in the area of EFY students' perceptions of themselves as students and achievers. Most of these changes and differences favored Group I, especially in the more specific ways in which they perceived themselves.

For example, when asked to rate themselves on the five-step scale as to their success in doing things they "set out to do," Group I members were the only ones whose group increased to a statistically significant degree from pre- to posttest. Group I went from a mean response of 3.37 to 3.61, a difference significant at the .05 level of confidence; and the Group II Low's shifted up from 3.33 to 3.69, a shift significant at the .02 level.

On the posttest, only Group I students showed significantly more faith in the improvement in their "personal academic abilities." Their mean response, 4.22, differed significantly from Group II's and Group III's mean responses of 3.55 and 3.24, respectively, at the .01 level of confidence.

More specifically, Group I felt more strongly that they had learned to "prepare more adequately for tests and quizzes." Its mean response of 3.98 differed significantly from Group II's and Group III's mean responses of 3.24 and 3.37, respectively, at the .01 level of confidence.

Also, Group I students felt they had learned better the "responsibility to attend classes regularly" than had Group II or III students. Their mean response of 4.29 differs from Group II's mean response of 3.68 at the .01 level of confidence, and from Group III's mean response of 3.87 at the .05 level of confidence.

When asked to rate themselves on the extent to which they had learned to "organize their thinking," Group I students again differed from Group II and III students. The mean response of Group I, 4.31, was higher than those of Groups II and III, 3.53 and 3.81, respectively, at the .01 level of confidence.

Group I students also reportedly felt more strongly than did students in Groups II or III that they had improved more in "study habits." The mean response of Group I on this item was 3.85, higher than both Group II's mean response of 3.03 and Group III's mean response of 3.08 at the .01 level of confidence.

The confidence of Group I students in the improvement of their "reading skills" was less significantly higher when compared with the confidence expressed by Groups II and III students. The Group I mean response of 3.67 was higher than those of Groups II and III, 3.27 and 3.29, respectively, but only at the .05 level of confidence.

All EFY students, as a group, showed a statistically significant increase in their belief in their mastery of the "skills of learning." The increase went from a mean of 2.69 to 3.02, significant at the .01 level of confidence; but the only individual EFY group to increase by a statistically significant amount was Group I, which went from 2.53 to 3.15, significant at the .001 level of confidence.

Whereas Group I rather consistently perceived itself in a more favorable academic light than did Groups II and III on these more specific characteristics, Group II was the only group to register a statistically significant increase in faith in "ability to do things well in general." The shift was from 3.60 to 3.97, significant at the .01 level of confidence. It seems possible that an interaction effect took place; that even though the students tended not to rate themselves highly on specific academic attributes, on which they might be "pinned down," they felt a necessity to report themselves improved in ability to do things "in general." However, this supposition must remain pure speculation.

When EFY students were asked to check on a five-step scale the extent to which they felt they were "busy" during the EFY year, the following conclusions were evident: the ACT Low's tended to report themselves as "less busy" when compared with ACT High's; Group I students tended to report themselves as "more busy" than the other groups, both for "Fall, 1962," and for "past year." These tendencies, significant at the .01 level of confidence, held up throughout the distributions, and indicate that the High's and the Group I people probably either were actually "busier" or else perceived themselves to be so.

One last comparison between Group I and Group II concludes this section. When the students were asked if they thought that their college records were good indications of what they could do, a higher proportion of Group I, 25 out of 52, answered "yes" as compared with Group II where 6 out of 58 responded affirmatively; this finding was significant at the .01 level of confidence according to chi-square analysis. A larger proportion of Group II, 52 out of 58, answered "no" than did Group I where 27 out of 52 replied negatively; this finding was significant at the .05 level according to chi-square analysis. In other words, Group I students apparently were more satisfied with their records and, as a group, were more ready to accept their records as true pictures of themselves than

Group II students were. This appears to be another factor in the more favorable reactions to and evaluations of the Experimental Freshman Year Program by the students in Group I.

Data from the questionnaires indicate the following general conclusions can be drawn:

1. The student groups were, for all practical purposes, equal in ability and biographical and other normative data at the start of the EFY Program; that is, they did not differ significantly as groups in biographical, school-related, parent-related, or self-evaluation variables before the program began.

2. Those differences found between the ACT High classification and the ACT Low classification are differences that might be expected. For example, ACT High's more often had had college preparatory curricula and were more often from out of state.

3. The students in this study tended to over-evaluate themselves academically, and other evidence shows such over-evaluation to be typical of low achievers.

4. The EFY students, like Southern Illinois University students in general, tend to be dissatisfied with their housing in Carbondale.

5. When asked why they do well or poorly in school, EFY students tend to answer "honestly" by placing the blame or credit upon themselves and their motivation.

6. EFY students, as a group, report they have enjoyed and do enjoy school.

7. Group I apparently both enjoyed their educational program more and felt more academically improved by it than Groups II and III did.

8. The above conclusion implies that Group I generally had a more favorable attitude toward Southern Illinois University and college in general than Groups II and III had.

Two articles based upon the data and conclusions of this chapter which have been submitted to professional journals are included in Appendix F.

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Appendix A

EFY Student Information and Attitude Questionnaire, Pre-Treatment Version

Southern Illinois University

EXPERIMENTAL FRESHMAN YEAR PROGRAM

STUDENT QUESTIONNAIRE

Name______________________________________ Record No.______________
Last First Middle

Experimental Freshman Year Group (specify I, II, or III)________________

S.I.U. Address____________________________________Phone______________

Name of Parent ☐ Guardian ☐ ______________________________Phone______________

Address of Parent or Guardian____
Street No. City State

INSTRUCTIONS: Complete the items listed below. Circle the number that you select to answer each item, for example: If you are a male, you would circle number one ① in item number 7.

On the items that have this scale ⇦ ☐☐☐☐☐☐☐ ⇨

indicate your response by marking an "X" in the appropriate box.

---

7. What is your sex?

    1. male
    2. female

8. What is your present age?

    1. 17
    2. 18
    3. 19
    4. 20-22
    5. 23 or over

9. When did you graduate from high school?

    1. June, 1962
    2. mid-year 1961-62
    3. June, 1961
    4. 1960
    5. 1959 or before

Do not write below this line.

1	2	3	4	5	6	7	8	9

2

10. What was the size of your high school graduating class?

    1. less than 25
    2. 26-49
    3. 50-99
    4. 100-199
    5. 200-299
    6. 300-399
    7. 400-599
    8. 600 or over

11. How many brothers do you have?

    1. none
    2. one
    3. two
    4. three
    5. more than three; specify how many_____

12. How many sisters do you have?

    1. none
    2. one
    3. two
    4. three
    5. more than three; specify how many_____

13. What is your father's occupation?

    1. professional person
    2. laborer
    3. independent businessman
    4. supervisor or executive
    5. retired
    6. other (please specify):__________________________

14. What is your mother's occupation?

    1. housewife
    2. secretary
    3. teacher
    4. clerk
    5. businesswoman
    6. other (please specify):__________________________

Do not write below this line.

10	11	12	13	14

15. What was the highest level of education completed by your father?

1. grade school (7th grade or less)
2. 8th grade
3. some high school
4. completed high school
5. some college
6. completed college
7. some graduate work
8. M. A. completed
9. Ph.D. completed

16. What was the highest level of education completed by your mother?

1. grade school (6th grade or less)
2. 8th grade
3. some high school
4. completed high school
5. some college
6. completed college
7. some graduate work
8. M.A. completed
9. Ph.D. completed

17. How many of your brothers and/or sisters attended college?

1. none
2. one
3. two
4. three or four
5. five or more

18. How many of your brothers and/or sisters graduated from college?

1. none
2. one
3. two
4. three or four
5. five or more

19. How many of your brothers and/or sisters attended S.I.U.?

1. none
2. one
3. two
4. three or four
5. five or more

Do not write below this line.

15	16	17	18	19

20. How many of your brothers and/or sisters graduated from S.I.U.?

   1. none
   2. one
   3. two
   4. three or four
   5. five or more

21. What is the marital status of your parents or guardian?

   1. married
   2. separated
   3. divorced
   4. widowed

22. Do both of your parents work?

   1. yes
   2. no

23. How effectively has your mother performed as a parent?

   Very ineffectively ⇦ ☐ ☐ ☐ ☐ ☐ ⇨ Very effectively

24. How effectively has your father performed as a parent?

   Very ineffectively ⇦ ☐ ☐ ☐ ☐ ☐ ⇨ Very effectively

25. Indicate the extent to which your mother wants you to graduate from college.

   Does not want me to graduate ⇦ ☐ ☐ ☐ ☐ ☐ ⇨ Wants me to graduate

26. Indicate the extent to which your father wants you to graduate from college.

   Does not want me to graduate ⇦ ☐ ☐ ☐ ☐ ☐ ⇨ Wants me to graduate

27. Indicate the amount of conflict you experience in your home environment.

   No conflict ⇦ ☐ ☐ ☐ ☐ ☐ ⇨ Considerable conflict

28. Indicate the amount of conflict you experienced in your school environment.

   No conflict ⇦ ☐ ☐ ☐ ☐ ☐ ⇨ Considerable conflict

x^2 .050

Do not write below this line.

20	21	22	23	24	25	26	27	28

29. What is your military status?

    1. veteran
    2. non-veteran--must go in service
    3. non-veteran--exempt
    4. female
    5. over age for draft

30. What is the population of the town or city in which you live?

    1. under 500
    2. 501-5,000
    3. 5,001 to 15,000
    4. 15,001 to 60,000
    5. 60,001 to 100,000
    6. 100,001 to 300,000
    7. 300,001 to 500,000
    8. above 500,000

31. What type of curriculum did you take in high school?

    1. college preparatory
    2. commercial
    3. agricultural
    4. vocational
    5. general
    6. other (please specify): ______________________

32. What was your high school grade average?

X^2 .050

    1. E or F
    2. D-
    3. D
    4. D+
    5. C-
    6. C
    7. C+
    8. B
    9. A

33. Are any of your close friends currently attending S.I.U.?

    1. Yes
    2. No

Do not write below this line.

29	30	31	32	33

34. To how many schools did you apply other than S.I.U.?

    1. none
    2. one
    3. two
    4. three
    5. four or more

35. How many schools other than S.I.U. accepted you?

    1. none
    2. one
    3. two
    4. three
    5. four or more

36. Are you a resident of Illinois?

    1. Yes
    2. No

37. How far from S.I.U. is your home?

    1. less than 50 miles
    2. 50-100 miles
    3. 101-200 miles
    4. 201-400 miles
    5. more than 400 miles

38. To what extent did you take part in extracurricular and social (recreational) activities while you were in high school?

    1. more than 30 hours a week
    2. between 20 and 30 hours a week
    3. between 10 and 20 hours a week
    4. between 5 and 10 hours a week
    5. less than 5 hours a week

39. Is your high school record an accurate indication of what you can do?

    1. Yes
    2. No

40. How do you feel when you fail to do what you have told someone you will do?

    1. I feel obligated to give them an explanation and immediately do so.
    2. I want to explain but generally never have the chance.
    3. I feel they won't worry about it.
    4. I never think about it afterward.

Do not write below this line.

34	35	36	37	38	39	40

41. How do you rate yourself as a person?

1. one of the best
2. about as good as other people
3. better than most people
4. inadequate compared to others
5. one of the less adequate

42. Do other people measure up to your expectations?

1. almost never
2. very seldom
3. some of the time
4. most of the time
5. almost always

43. Do you believe people should always do what they say they are going to do?

1. yes
2. no

44. If you and a number of other people worked on a project for the same length of time, would you probably:

1. accomplish more than anyone else?
2. accomplish more than most of the others?
3. accomplish about the same amount as the average person?
4. accomplish less than most of the others?

45. Indicate to what extent you discuss your personal problems with others.

Never discuss personal problems ⇦ ☐ ☐ ☐ ☐ ☐ ⇨ Always discuss personal problems

46. Indicate the extent to which other people help you make your decisions.

Never have help ⇦ ☐ ☐ ☐ ☐ ☐ ⇨ Always have help.

47. To what extent do you generally trust other people?

Infrequently trust others ⇦ ☐ ☐ ☐ ☐ ☐ ⇨ Frequently trust others

48. Do you think students in the lower third of their high school class should go to college?

1. yes
2. no
3. no reaction

Do not write below this line.

41	42	43	44	45	46	47	48

49. What would you like to be doing ten years from now?

____

50. What kind of goals do you generally set for yourself?

1. goals I can attain right away
2. goals I can attain within a month or two
3. goals I can attain within one year
4. goals which may take many years to attain

To what extent do you actively participate with your PARENTS in the following types of activities? Indicate your response on the scales below.

51. Social--
little participation ◀ ☐ ☐ ☐ ☐ ☐ ▶ much participation

52. Intellectual--
little participation ◀ ☐ ☐ ☐ ☐ ☐ ▶ much participation

53. Cultural--
little participation ◀ ☐ ☐ ☐ ☐ ☐ ▶ much participation

54. Religious--
little participation ◀ ☐ ☐ ☐ ☐ ☐ ▶ much participation

55. Recreational--
little participation ◀ ☐ ☐ ☐ ☐ ☐ ▶ much participation

56. Indicate to what extent you feel you have the material things such as spending money, car, clothes, etc.. that you need to be happy.

much more needed ◀ ☐ ☐ ☐ ☐ ☐ ▶ have all I need

57. Do you let people know when you are mad, unhappy, worried, etc.?

1. almost always
2. most of the time
3. some of the time
4. very rarely
5. never

58. How do you feel about most activities in which you are engaged (work, school, hobby projects, etc.)? Mark the response which best suggests your feelings.

1. I try to do everything as well as I can whether I like the work or not.
2. I like to do a good job in those things I enjoy and at least finish the other things.
3. Getting the thing done is most important to me.
4. I think it is only important to finish the things I like.
5. I never get to do things I want to do, and so I just do things halfway.

Do not write below this line.

49	50	51	52	53	54	55	56	57	58

59. Indicate how much faith you have in your ability to do things well in general.

very little faith in my ability	⬅ ☐ ☐ ☐ ☐ ☐ ➡	considerable faith in my ability

60. Select the response which indicates how you feel about "being on your own" in situations. I like being on my own:

1. very little of the time
2. some of the time
3. no reaction
4. most of the time
5. all of the time

61. Indicate how much you rely on others to tell you how well or how poorly you have performed.

rely on others very much	⬅ ☐ ☐ ☐ ☐ ☐ ➡	rely on others very little

62. Indicate the extent to which you feel you are successful in doing what you set out to do.

never successful	⬅ ☐ ☐ ☐ ☐ ☐ ➡	always successful

63. Indicate the extent to which you believe you act as a follower in most group activity.

almost never	⬅ ☐ ☐ ☐ ☐ ☐ ➡	almost always

64. Circle the point in your education at which you stopped enjoying school.

1. I never stopped enjoying school
2. 1st to 3rd grades
3. 4th to 6th grades
4. 7th to 9th grades
5. 10th to 12th grades

65. Indicate how hard you usually work to reach the goals you set.

not very hard	⬅ ☐ ☐ ☐ ☐ ☐ ➡	just as hard as is necessary to reach my goal

66. Indicate the extent to which you believe you act as a leader in most group activity.

almost never	⬅ ☐ ☐ ☐ ☐ ☐ ➡	almost always

67. Indicate how you feel S.I.U. ranks as an institution of higher education.

very low	⬅ ☐ ☐ ☐ ☐ ☐ ➡	very high

Do not write below this line.

59	60	61	62	63	64	65	66	67

68. How were you informed about the Experimental Freshman Year Program?

1. S.I.U. Admissions Office
2. other S.I.U. staff member
3. S.I.U. student
4. parents
5. high school teacher, principal, or counselor
6. other (please specify):______________________________

69. Who encouraged you to apply for admission to S.I.U.? Rank them in the order of their influence. Mark number one (1) beside the most influential person and number six (6) beside the least influential person.

Rank
__________ mother
__________ father
__________ teacher, principal, or counselor
__________ brother or sister
__________ religious leader
__________ friend

70. Why did you come to college?

1.______________________________
2.______________________________
3.______________________________

71. What is your probable major field in college?

____

72. Do you really think you will finish your degree?

1. yes
2. no
3. maybe

73. Did you generally enjoy school before coming to S.I.U.?

1. yes
2. no

74. Have you enjoyed school since coming to S.I.U.?

1. yes
2. no

75. Do you want to complete college now that you are here?

1. yes
2. no

Do not write below this line.

68	69	70	71	72	73	74	75

76. For what reasons do you feel you did not do well in high school?

1. ______________________________
2. ______________________________
3. ______________________________

77. If you feel you are going to do well in college, tell us why.

1. ______________________________
2. ______________________________
3. ______________________________

78. To what extent do you feel that the educational aims and objectives at S.I.U. are consistent with yours?

inconsistent ◀ ☐ ☐ ☐ ☐ ☐ ▶ highly consistent

79. Indicate the extent to which you feel you are a capable, productive student.

not productive or capable ◀ ☐ ☐ ☐ ☐ ☐ ▶ very productive or capable

80. How do you feel about the educational program you are in now?

dislike it ◀ ☐ ☐ ☐ ☐ ☐ ▶ like it very much

81. Indicate the degree to which you feel the students in the Experimental Freshman Year Program are motivated to succeed in college.

not motivated to succeed ◀ ☐ ☐ ☐ ☐ ☐ ▶ motivated to succeed

82. What do you think others feel concerning the Experimental Freshman Year Program?

unfavorable toward program ◀ ☐ ☐ ☐ ☐ ☐ ▶ favorable toward program

83. Indicate the extent to which you believe that you have mastered the skills of learning.

barely mastered skills ◀ ☐ ☐ ☐ ☐ ☐ ▶ completely mastered skills

84. If you had the choice, which of the following would you choose?

1. to receive 6 credit hours of "A" for a college course or
2. to receive 8 credit hours of "B" for a college course

85. If you had the choice, which of the following would you choose?

1. to receive 6 credit hours of "A" for a college course or
2. to receive 7 credit hours of "B" for a college course

Do not write below this line.

76	77	78	79	80	81	82	83	84	85

86. If you had the choice, which of the following would you choose ?

    1. to receive 6 credit hours of "A" for a college course or
    2. to receive 10 credit hours of "C" for a college course

87. Were you able to form a strong favorable relationship with a teacher who was consistently interested and supported you before you came to S.I.U.?

    1. yes
    2. no

88. Have you been able to form a strong favorable relationship with a teacher who is consistently interested and supports you since you have come to S.I.U.?

    1. yes
    2. no

    If yes, who? ______________________________

89. Have you been able to form a strong favorable relationship with a University staff member (other than a teacher) who is consistently interested and supports you since you have come to S.I.U.?

    1. yes
    2. no

    If yes, who? ______________________________

90. In what type of housing unit are you living?

    1. off-campus apartment
    2. off-campus room in an organized house
    3. off-campus room in an unorganized (no student government) house
    4. University temporary housing (Dowdell, Southern Acres, Illinois Avenue, University Avenue)
    5. Thompson Point or Woody Hall
    6. At home (commuting)
    7. Small Group Housing Area
    8. University married housing

91. Are you content with your present residence?

    1. yes
    2. no
    3. If no, describe difficulties: ______________________________
    ____

Do not write below this line.

86	87	88	89	90	91

3

92. How many other students live in the building in which you live?

1. none
2. one
3. two or three
4. four or five
5. six to nine
6. 10 to 20
7. 21 to 40
8. 41 to 80
9. more than 80

93. How many roommates do you have?

1. none
2. one
3. two
4. three
5. four
6. five
7. six
8. seven
9. eight

94. Were any of your roommates your friends before you came to S.I.U.?

1. yes
2. no

95. Indicate how many of your roommates are in the Experimental Freshman Year Program.

1. none
2. from Group I ________________(number)
3. from Group II ________________(number)
4. from Group III ________________(number)

96. Do you have an adequate place in which to study in your living quarters?

1. yes
2. no

97. How much time do the other students in your place of residence spend studying?

1. much less than I do
2. about as much as I do
3. more than I do

Do not write below this line.

92	93	94	95	96	97

98. Are there any enforced study periods or rules in the building in which you live?

1. yes
2. no

99. Where do you typically study?

1. in my room
2. library
3. empty classroom
4. University Center--Group I space
5. in the building where I live, but not in my own room
6. University Center study rooms or lounges
7. Other (specify): ______

100. How far is your residence from the University Center?

1. 1/4 mile or less
2. 1/4 mile to 1/2 mile
3. 1/2 mile to one mile
4. one mile to two miles
5. two miles to three miles
6. three miles to four miles
7. more than four miles

101. What means of transportation do you use to travel from your residence to the campus?

1. I walk
2. car
3. bicycle
4. bus
5. other (please specify): ______

102. How do you solve the problems of getting your clothes washed?

1. I wash them in the dorm or house in which I'm living.
2. I send them home.
3. I send them to the local commercial laundries.
4. I wash them at the local commercial laundries myself.
5. other (please specify): ______

103. Do you have adequate sleeping conditions?

1. yes
2. no
3. if no, describe inadequacy: ______

Do not write below this line.

98	99	100	101	102	103

104. Do you have cooking privileges?

1. yes
2. no

105. Where do you usually eat?

Breakfast:
1. I don't
2. home or local Carbondale residence
3. University Center cafeteria
4. other (please specify): ______________________

Lunch:
1. I don't
2. home or Carbondale residence
3. University Center cafeteria
4. carry lunch to campus
5. restaurant off campus
6. other (please specify): ______________________

Supper:
1. I don't
2. home or Carbondale residence
3. University Center cafeteria
4. carry supper to campus
5. restaurant off campus
6. other (please specify): ______________________

106. How many hours per week are you working now?

1. none
2. less than five hours
3. six to ten hours
4. eleven to fifteen hours
5. sixteen to twenty hours
6. twenty-one to twenty-five hours
7. twenty-six to thirty hours
8. more than thirty hours

107. Do you plan to work during your freshman year?

1. yes
2. no

Do not write below this line.

104	105	106	107

108. In how many organized campus activities, for which you do not receive credit, do you participate?

1. one
2. two or three
3. four or five
4. six or seven
5. eight or nine
6. ten or eleven
7. twelve or thirteen
8. more than thirteen

109. Indicate how busy you are this quarter.

have much free time ⬅ ☐ ☐ ☐ ☐ ☐ ➡ very busy

110. Indicate the extent to which you participate in social activities.

low participation ⬅ ☐ ☐ ☐ ☐ ☐ ➡ high participation

111. Do you receive financial assistance from anyone while you are attending the University?

1. yes
2. no

112. Do you feel you have any financial problems?

1. yes
2. no

Do not write below this line.

108	109	110	111	112

Appendix B

EFY Student Information and Attitude Questionnaire, Post-Treatment Version

Southern Illinois University

EXPERIMENTAL FRESHMAN YEAR PROGRAM

STUDENT QUESTIONNAIRE

Name____ Record No.__________________
Last First Middle

Experimental Freshman Year Group (specify I, II, or III)__________________

S.I.U. Address____ Phone________________

Home Address____ Phone________________

INSTRUCTIONS: Complete the items listed below. Circle the number that you select to answer each item, for example: If you live at Thompson Point, you would circle number five ⑤ in item number 7.

On the items that have this scale ◀☐☐☐☐☐▶

indicate your response by marking an "X" in the appropriate box.

---

7. In what type of housing unit are you now living?

   1. Off-campus apartment.
   2. Off-campus room in an organized house.
   3. University temporary housing (Dowdell, Southern Acres, Illinois Avenue, University Avenue).
   4. Off-campus room in an unorganized (no student government) house.
   5. Thompson Point or Woody Hall.
   6. At home (commuting).
   7. Small Group Housing Area.
   8. University married housing.
   9. Other (please specify):____________________________

8. Are you content with your present residence?

   1. yes
   2. no
   3. If no, describe difficulties:______________________________________
   ____

Do not write below this line.

1	2	3	4	5	6	7	8

9. How many other students live in the building in which you live?

    1. none
    2. one
    3. two or three
    4. four or five
    5. six to nine
    6. 10 to 20
    7. 21 to 40
    8. 41 to 80
    9. more than 80

10. How many roommates do you have?

    1. none
    2. one
    3. two
    4. three
    5. four
    6. five
    7. six
    8. seven
    9. eight

11. How much time do the other students in your place of residence spend studying?

    1. much less than I do
    2. about as much as I do
    3. more than I do

12. Where do you typically study?

    1. in my room
    2. Library
    3. empty classroom
    4. University Center--Group I space
    5. in the building where I live, but not in my own room
    6. University Center study rooms or lounges
    7. Other (specify):____________________________________

13. Have you changed your place of residence this year?

    1. yes
    2. no

14. Has your place of residence affected your academic performance this year?

affected very much ◀ ☐ ☐ ☐ ☐ ☐ ▶ affected very little

Do not write below this line.

9	10	11	12	13	14

15. How many hours per week are you working now?

1. none
2. less than five hours
3. six to ten hours
4. eleven to fifteen hours
5. sixteen to twenty hours
6. twenty-one to twenty-five hours
7. twenty-six to thirty hours
8. more than thirty hours

16. Do you plan to work during your next year of college?

1. yes
2. no

17. Do you receive financial assistance from anyone while you are attending the University?

1. yes
2. no

18. Do you feel you have any financial problems?

1. yes
2. no

19. What is the current marital status of your parents or guardian?

1. married
2. separated
3. divorced
4. widowed

20. Do both of your parents work?

1. Only my father works.
2. Only my mother works.
3. Both work.
4. Neither work.

21. How effectively has your mother performed as a parent?

Very ineffectively ◀ ☐ ☐ ☐ ☐ ☐ ▶ Very effectively

22. How effectively has your father performed as a parent?

Very ineffectively ◀ ☐ ☐ ☐ ☐ ☐ ▶ Very effectively

Do not write below this line.

15	16	17	18	19	20	21	22

23. Indicate the extent to which your mother wants you to graduate from college.

Does not want me to graduate	⬅ ☐ ☐ ☐ ☐ ☐ ➡	Wants me to graduate.

24. Indicate the extent to which your father wants you to graduate from college.

Does not want me to graduate	⬅ ☐ ☐ ☐ ☐ ☐ ➡	Wants me to graduate.

25. Indicate the amount of conflict you have experienced in your home environment this past year.

No conflict	⬅ ☐ ☐ ☐ ☐ ☐ ➡	Considerable conflict

26. Indicate the amount of conflict you have experienced in your college environment this past year.

No conflict	⬅ ☐ ☐ ☐ ☐ ☐ ➡	Considerable conflict

27. Is your high school record an accurate indication of what you can do?

1. yes
2. no

28. How do you rate yourself as a person?

1. one of the best
2. about as good as other people
3. better than most people
4. inadequate compared to others
5. one of the less adequate

29. How do you feel when you fail to do what you have told someone you will do?

1. I feel obligated to give them an explanation and immediately do so.
2. I want to explain but generally never have the chance.
3. I feel they won't worry about it.
4. I never think about it afterward.

30. Do other people measure up to your expectations?

1. almost never
2. very seldom
3. some of the time
4. most of the time
5. almost always

31. Do you believe people should always do what they say they are going to do?

1. yes
2. no

Do not write below this line.

23	24	25	26	27	28	29	30	31

32. If you and a number of other people worked on a project for the same length of time, would you probably:

1. Accomplish more than anyone else?
2. Accomplish more than most of the others?
3. Accomplish about the same amount as the average person?
4. Accomplish less than most of the others?

33. Creativity means ______________________________

____

____

34. Indicate the extent to which other people help you make your decisions.

Never have help ◀☐☐☐☐☐▶ Always have help

35. To what extent do you generally trust other people?

Infrequently trust others ◀☐☐☐☐☐▶ Frequently trust others

36. Indicate to what extent you discuss your personal problems with others.

Never discuss personal problems ◀☐☐☐☐☐▶ Always discuss personal problems

37. Do you think students in the lower third of their high school class should go to college?

1. yes
2. no
3. no reaction

38. What would you like to be doing ten years from now?

____

39. If you are successful in college, to what major factors would you attribute your success?

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________

Do not write below this line.

32	33	34	35	36	37	38	39

40. If you are unsuccessful in college, to what major factors would you attribute your lack of success?

1. ____________________

2. ____________________

3. ____________________

4. ____________________

41. Is your college record an accurate indication of what you can do?

1. yes
2. no

42. What kind of goals do you generally set for yourself?

1. goals I can attain right away
2. goals I can attain within a month or two
3. goals I can attain within one year
4. goals which may take many years to attain

To what extent do you actively participate with your PARENTS in the following types of activities? Indicate your response on the scales below.

43. Social

little participation ◀ ☐ ☐ ☐ ☐ ☐ ▶ much participation

44. Intellectual

little participation ◀ ☐ ☐ ☐ ☐ ☐ ▶ much participation

45. Cultural

little participation ◀ ☐ ☐ ☐ ☐ ☐ ▶ much participation

46. Religious

little participation ◀ ☐ ☐ ☐ ☐ ☐ ▶ much participation

47. Recreational

little participation ◀ ☐ ☐ ☐ ☐ ☐ ▶ much participation

48. Indicate to what extent you feel you have the material things such as spending money, car, clothes, etc., that you need to be happy.

Much more needed ◀ ☐ ☐ ☐ ☐ ☐ ▶ Have all I need

Do not write below this line.

40	41	42	43	44	45	46	47	48

49. What grade average for your college work will satisfy you? ____________

50. What are your educational plans?

    1. complete degree at S.I.U.
    2. will continue at S.I.U. but do not plan to graduate
    3. will complete degree at another school after more work here at S.I.U.
    4. will leave school at the end of this quarter
    5. have been accepted at another school for next fall and plan to complete degree there
       Please specify school:____
    6. plan to transfer to V.T.I.
    7. other. Please specify:____

51. Do you think that your Experimental Freshman Year Program group should be continued in the future?

    1. yes
    2. no

52. Which group would you like to have been in if you had had a choice?

    1. Group I
    2. Group II
    3. Group III
    4. No E.F.Y. Group

53. Do you feel that you would have become a more independent person if you had not been in the Experimental Freshman Year Program?

    would not have become more independent ◀ ☐ ☐ ☐ ☐ ☐ ▶ would have become more independent

54. Indicate the extent to which you feel your E.F.Y. instructors are concerned with your being successful in the University.

    Unconcerned ◀ ☐ ☐ ☐ ☐ ☐ ▶ Highly concerned

55. Indicate the extent to which you received personal assistance with your course work from your E.F.Y. staff.

    Little personal assistance ◀ ☐ ☐ ☐ ☐ ☐ ▶ Much personal assistance

56. Indicate the extent to which you received assistance with your personal problems (not related to course work) from your E.F.Y. staff.

    Little personal assistance ◀ ☐ ☐ ☐ ☐ ☐ ▶ Much personal assistance

---

Do not write below this line.

49	50	51	52	53	54	55	56

57. How much personal attention have you received from your instructors as compared to students not in your E.F.Y. Program?

Much less attention ◀ ☐ ☐ ☐ ☐ ☐ ▶ Much more attention

58. Select the response which indicates how you feel about "being on your own" in situations. I like being on my own:

1. very little of the time
2. some of the time
3. no reaction
4. most of the time
5. all of the time

59. Do you let people know when you are mad, unhappy, worried, etc.?

1. almost always
2. most of the time
3. some of the time
4. very rarely
5. never

60. How do you feel about most activities in which you are engaged (work, school, hobby projects, etc.)? Mark the response which best suggests your feelings.

1. I try to do everything as well as I can whether I like the work or not.
2. I like to do a good job in those things I enjoy and at least finish the other things.
3. Getting the thing done is most important to me.
4. I think it is only important to finish the things I like.
5. I never get to do things I want to do, and so I just do things halfway.

61. Indicate how much faith you have in your ability to do things well in general.

Very little faith in my ability ◀ ☐ ☐ ☐ ☐ ☐ ▶ Considerable faith in my ability

62. Indicate the extent to which you feel you are successful in doing what you set out to do.

Never successful ◀ ☐ ☐ ☐ ☐ ☐ ▶ Always successful

63. Indicate the extent to which you believe you act as a follower in most group activity.

Almost never ◀ ☐ ☐ ☐ ☐ ☐ ▶ Almost always

Do not write below this line.

57	58	59	60	61	62	63

64. Indicate the extent to which you feel that your personal academic abilities have improved this past year.

Academic abilities unchanged ◀ ☐ ☐ ☐ ☐ ☐ ▶ Academic abilities highly improved

65. What do you think your grade point average will be for Spring Quarter?

1. 1.0 - 1.4
2. 1.5 - 1.9
3. 2.0 - 2.4
4. 2.5 - 2.9
5. 3.0 - 3.4
6. 3.5 - 3.9
7. 4.0 - 4.4
8. 4.5 - 4.9
9. 5.0

66. What do you think your overall grade point average will be at the end of Spring Quarter?

1. 1.0 - 1.4
2. 1.5 - 1.9
3. 2.0 - 2.4
4. 2.5 - 2.9
5. 3.0 - 3.4
6. 3.5 - 3.9
7. 4.0 - 4.4
8. 4.5 - 4.9
9. 5.0

67. Indicate the extent to which you have learned to prepare adequately for examinations and quizzes.

Failed to learn ◀ ☐ ☐ ☐ ☐ ☐ ▶ Learned well

68. Indicate the extent to which you have learned the responsibility of turning in assignments on time.

Failed to learn ◀ ☐ ☐ ☐ ☐ ☐ ▶ Learned well

69. Indicate the extent to which you have learned the responsibility of attending class.

Failed to learn ◀ ☐ ☐ ☐ ☐ ☐ ▶ Learned well

70. Indicate the extent to which you feel you have learned to organize your thinking this past year.

Failed to learn to organize thinking ◀ ☐ ☐ ☐ ☐ ☐ ▶ Learned to organize thinking

---

Do not write below this line.

64	65	66	67	68	69	70

71. Indicate the extent to which you feel you have developed effective study habits this past year.

Study habits not developed	◀ ☐ ☐ ☐ ☐ ☐ ▶	Study habits highly developed

72. Indicate the extent to which you feel you have developed effective reading skills this past year.

Reading skills not developed	◀ ☐ ☐ ☐ ☐ ☐ ▶	Reading skills highly developed

73. Circle the point in your education at which you stopped enjoying school.

    1. I never stopped enjoying school.
    2. 1st to 3rd grades
    3. 4th to 6th grades
    4. 7th to 9th grades
    5. 10th to 12th grades
    6. freshman year in college

74. Indicate how much you rely on others to tell you how well or how poorly you have performed.

Rely on others very much	◀ ☐ ☐ ☐ ☐ ☐ ▶	Rely on others very little

75. Indicate how hard you usually work to reach the goals you set.

Not very hard	◀ ☐ ☐ ☐ ☐ ☐ ▶	Just as hard as is necessary to reach my goal

76. Indicate the extent to which you believe you act as a leader in most group activity.

Almost never	◀ ☐ ☐ ☐ ☐ ☐ ▶	Almost always

77. How do you typically respond to failure on an important test in a course?

give up in the course	◀ ☐ ☐ ☐ ☐ ☐ ▶	work harder in the course

78. Indicate how you feel S.I.U. ranks as an institution of higher education.

very low	◀ ☐ ☐ ☐ ☐ ☐ ▶	very high

Do not write below this line.

71	72	73	74	75	76	77	78

79. Indicate how you feel about the amount of work assigned outside of classes.

Not enough work assigned ◀ ☐ ☐ ☐ ☐ ☐ ▶ Too much work assigned

80. Do you feel that more student participation in class would have been beneficial in learning the subject matter of your courses?

less student participation ◀ ☐ ☐ ☐ ☐ ☐ ▶ more student participation

81. Do you feel that more personal interaction with your Experimental Freshman Year instructors would have been valuable in mastering the subject matter of your courses?

preferred less interaction ◀ ☐ ☐ ☐ ☐ ☐ ▶ preferred more personal interaction

Groups II and III skip items 82 through 86.

Indicate how effective your instructors were in teaching their courses.

82. Mr. Cohen

Ineffective ◀ ☐ ☐ ☐ ☐ ☐ ▶ Highly effective

83. Mrs. Cohen

Ineffective ◀ ☐ ☐ ☐ ☐ ☐ ▶ Highly effective

84. Mr. Glickman

Ineffective ◀ ☐ ☐ ☐ ☐ ☐ ▶ Highly effective

85. Mr. Cotton

Ineffective ◀ ☐ ☐ ☐ ☐ ☐ ▶ Highly effective

86. Mr. Warner

Ineffective ◀ ☐ ☐ ☐ ☐ ☐ ▶ Highly effective

Groups I and III skip items 87 through 89.

Indicate how effective your instructors were in teaching their courses.

87. Mrs. Lutz

Ineffective ◀ ☐ ☐ ☐ ☐ ☐ ▶ Highly effective

Do not write below this line.

79	80	81	82	83	84	85	86	87

88. Mrs. Bumgardner

Ineffective ◀ ☐ ☐ ☐ ☐ ☐ ▶ Highly effective

89. Miss Bleem

Ineffective ◀ ☐ ☐ ☐ ☐ ☐ ▶ Highly effective

90. Indicate the extent to which you feel that effort was extended by your Experimental Freshman Year staff to prepare you to be successful in college.

no effort extended ◀ ☐ ☐ ☐ ☐ ☐ ▶ all possible effort extended

91. What major changes would you recommend be made in your Experimental Freshman Year group's program if it is continued in the future?

1.____
2.____
3.____
4.____

92. Rate the extent to which you have felt a part of the Experimental Freshman Year Program this year.

not a member ◀ ☐ ☐ ☐ ☐ ☐ ▶ very much a member

Indicate for each quarter the number of hours for which you were registered at the end of that quarter.

93-94. Fall Quarter____________________

95-96. Winter Quarter____________________

97-98. Spring Quarter____________________

Indicate for each quarter the number of hours you would like to have carried.

99-100. Fall Quarter____________________

101-102. Winter Quarter____________________

103-104. Spring Quarter____________________

105. Would you like to have had more choice in determining what courses you were to take this year?

less choice ◀ ☐ ☐ ☐ ☐ ☐ ▶ much more choice

Do not write below this line.

88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105

106. Why did you come to college?

1.____
2.____
3.____

107. What is your probable major field in college?

____

108. Do you really think you will finish your degree?

1. yes
2. no
3. maybe

109. Did you generally enjoy school before coming to S.I.U.?

1. yes
2. no

110. Have you enjoyed school since coming to S.I.U.?

1. yes
2. no

111. Do you want to complete college?

1. yes
2. no

112. For what reasons do you feel you did not do well in high school?

1.____
2.____
3.____

113. If you feel you are going to do well in college, tell us why.

1.____
2.____
3.____

114. To what extent do you feel that the educational aims and objectives at S.I.U. are consistent with yours?

Inconsistent ◀ ☐ ☐ ☐ ☐ ☐ ▶ Highly consistent

115. Indicate the extent to which you feel you are a capable, productive student.

Not productive or capable ◀ ☐ ☐ ☐ ☐ ☐ ▶ Very productive or capable

---

Do not write below this line.

106	107	108	109	110	111	112	113	114	115

116. How do you feel about the educational program in which you have participated this past year?

dislike it ◀☐☐☐☐☐▶ like it very much

117. In all your course work this year do you feel that too much time was spent in class in regard to what was learned?

1. yes
2. no

118. Indicate the degree to which you feel the students in the Experimental Freshman Year Program are motivated to succeed in college.

Not motivated to succeed ◀☐☐☐☐☐▶ Motivated to succeed

119. What do you think others feel concerning the Experimental Freshman Year Program?

Unfavorable toward program ◀☐☐☐☐☐▶ Favorable toward program

120. Indicate the extent to which you believe that you have mastered the skills of learning.

Barely mastered skills ◀☐☐☐☐☐▶ Completely mastered skills

121. If you had the choice, which of the following would you choose?

1. to receive 6 credit hours of "A" for a college course or
2. to receive 8 credit hours of "B" for a college course

122. If you had the choice, which of the following would you choose?

1. to receive 6 credit hours of "A" for a college course or
2. to receive 7 credit hours of "B" for a college course

123. If you had the choice, which of the following would you choose?

1. to receive 6 credit hours of "A" for a college course or
2. to receive 10 credit hours of "C" for a college course

124. Have you been able to form a strong favorable relationship with a teacher who is consistently interested and supports you since you have come to S.I.U.?

1. yes
2. no

If yes, who?______________________________

116	117	118	119	120	121	122	123	124

125. Have you been able to form a strong favorable relationship with a University staff member (other than a teacher) who is consistently interested and supports you since you have come to S.I.U.?

1. yes
2. no

If yes, who?____

126. Indicate how busy you have been this year.

have much free time ◀ ☐ ☐ ☐ ☐ ☐ ▶ very busy

127. Indicate the extent to which you participate in social activities.

Low participation ◀ ☐ ☐ ☐ ☐ ☐ ▶ High participation

Do not write below this line.

125	126	127

Appendix C

Categories for Classifying Responses to Pretest Item 70 and Posttest Item 106, "Why Did You Come to College?"

1. Standard reasons, or the most socially acceptable reasons, for attending an educational institution are simple indications that "an education" or "knowledge" is sought. Typical responses: "to get an education"; "to get a higher education"; "to get a better education"; "obtain knowledge"; "heighten intellectual capacity"; "realize importance of college education"; "further knowledge."
2. Reasons for obtaining the external trappings of a college education, such as "to get a degree" or "to get good grades."
3. Reasons of a professional or vocational nature, either general or specific. Examples: "to better myself financially"; "to prepare myself to make a good (or better) living"; "so I can live comfortably"; "to prepare myself to become a (teacher, lawyer, etc.)"; "security."
4. Intensely personal reasons, or reasons strongly linked to self. Examples: "to prove to myself that I can do it"; "to find myself"; "to become more well-rounded."
5. Reasons arising out of parent-related motivations. Examples: "my parents' desire"; "to show my parents I can do it"; "to make my parents proud."

6. Reasons indicating an individual's desire to fit into the social context more completely. Examples: "to meet people"; "to meet more different kinds of people"; "to learn to live with others"; "to adjust."
7. Reasons indicating an expectancy for college to mature oneself. Examples: "to grow up"; "to mature"; "to be on my own"; "to get away from home."
8. Reasons of affect, reasons indicating a desire for the lighter, more frivolous, less academic aspects of college. Examples: "easier than working"; "rather go to school than work"; "have fun"; "sports"; "football"; "baseball"; "girls"; "college life I've heard so much about"; "join a frat."
9. Miscellaneous or other reasons of which only 1, 2, or 3 examples occurred. Examples: "I like school"; "what I wanted to do"; "build foundation for a family"; "learn to compete with other students"; "to get a taste of college"; "why not"; "the thing to do"; "don't really know"; "find a husband or wife"; "my girl went"; "social pressure"; "sister talked me into it"; "need for a change"; "stay out of the service"; "way to a service commission."

Appendix D

Response Classifications for Open-Ended Questionnaire Items

Pre-Questionnaire Items

76. For what reasons do you feel you did not do well in high school?

77. If you feel you are going to do well in college, tell us why.

Post-Questionnaire Items

39. If you are successful in college, to what major factors would you attribute your success?

40. If you are unsuccessful in college, to what major factors would you attribute your lack of success?

112. For what reasons do you feel you did not do well in high school?

113. If you feel you are going to do well in college, tell us why.

Response Classification

1. Answers crediting, or blaming, amount of study or "work," attitude, willpower, desire, motivation for success or failure. Answers such as "me" and "myself" belong in this category.

2. Answers crediting, or blaming, intelligence or academic ability, including study habits.

3. Answers crediting, or blaming, parents, for either financial support or moral support; "to make parents proud" belongs in this category, too.

4. Answers crediting, or blaming, actions of persons other than self or parents for success or lack of it; answers such as "help of roommates," "good selection of friends," "wife's understanding, or lack of it," "EFY staff," "Cohen," "Glickman," "H.S. teacher or counselor," "understanding of others," "brother."

5. Answers crediting, or blaming, self-recognition of the importance of a college education to future well-being. Answers such as, "must get through college to achieve my goals"; "I know what I want after graduation"; "I need college, I feel, to better myself."
6. Answers crediting, or blaming, outside or recreational activities or extracurricular activities, such as a sport, "football."
7. Answers crediting, or blaming, the scholastic-living environment, including classes, courses, curriculum, living conditions. Answers such as "General Studies," "EFY Program," "living conditions," "environment," "study environment," "efficient library," "required courses," "poor courses," "poor grading system," "lack of challenge."
8. Answers in the "others," or "miscellaneous" category. Examples: "having to work," "procrastination," "money," "working now and coming back later," "no car," "not enough sleep," "married," "pressure," "church," "God's grace," "low standards," "insecurity or personal conflicts," "health," "having to wash and iron clothes," "nerves," "love for fiance."

9 No response.

Appendix E

Categories for Classifying Responses to Pretest Item 49 and Posttest Item 38, "What Do You Want to be Doing Ten Years from Now?"

1. Response indicating definite indecision, either by admission or implication, including frivolous answers. Examples: "undecided," "earning a living," "married," and for men, "President of General Motors."
2. Bare mention of broad area of future vocation. Examples: "business," "education."
3. Mention of field of occupational endeavor, without specifying particulars of the field and without any other specifications, such as climate, geography, area of specialization, etc. Examples: "high school teaching," "lawyer," "medicine," "architect," "housewife."
4. Mention of career field with particular specialization within the field emphasized. Examples: "teaching either math or physics in high school"; "be a veterinarian so can work with farm animals"; "be a chiropodist"; "corporation lawyer."
5. Career field, particular emphasis within field mentioned, as well as other circumstances of living, such as geography, climate, social strata, etc. Examples: "practicing law privately in a large city with opportunity to teach law in a law school in the city"; "be a structural designer and live on the West Coast"; "teach high school math in a community of not more than 50,000"; "eventually own and operate a motel in a resort area."

Appendix F

Two Articles Submitted for Publication

Based on Data from Experimental Freshman Year Program

Inflated Self-Evaluations by Low Achievers: A Study of Inconsistency

Implications for a New Technique of Assessing Attitudes

Inflated Self-Evaluations by Low Achievers: A Study of Inconsistency

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This study is concerned with a problem of attitude measurement in educational research. It has been postulated and demonstrated, to some degree, that attitudes, thoughts, and behaviors tend to be harmoniously interrelated (Newcomb, 1956; Osgood, 1957; Festinger, 1957; Heider, 1958; Rokeach, 1960; Rosenberg, Hovland, McGuire, Abelson, & Brehm, 1960; Katz, 1960; Sherif and Hovland, 1961). When attitudes, thoughts, and behaviors are incongruous for an individual, the evidence cited above indicates an individual makes the necessary adjustments to create harmony among these variables. This study reports data dealing with seemingly inconsistent self-evaluations and behavior patterns which, when examined closely, tend to support the above stated theory derived from communication and social psychology research. Data reported in this study will be of specific concern to persons in the guidance and student personnel field because it deals with the problem of the inability of low-achieving students to rate themselves realistically.

Past studies have indicated that "low achievers" tend to rate themselves higher than do professional persons responsible for evaluating them. For instance, Clark (1938) found that low ability students tended to assign themselves grades higher than those assigned by their teacher, whereas high ability students assigned themselves grades about the same as or lower than those assigned by the teacher. Gruner (1956) found that the more proficient and more experienced high school debaters more accurately rated themselves and their opponents and, before the judges' decisions were made known, more accurately predicted whether they had won or lost a debate than did the less proficient and less experienced debaters. Brown and Abeles (1960) found that low achievers will claim to know words they do not, in fact, know in order to create a "facade."

The tendency toward the inflation of self-evaluations by low achievers is further substantiated by recent data collected in Southern Illinois University's "Experimental Freshman Year Program" (EFYP). The purpose of the EFYP was to determine whether students who graduate in the lowest third of their high school graduating classes benefited from special curricula, training, and counseling in their freshman year of college. Treatments, procedures, and methodologies employed in the experiment have been described in detail in another article (Cohen, Kibler, & Miles, 1964). The study was conducted during the 1962-63 school year, and data were analyzed during the past year (1963-64).

Findings reported in this article are limited to a portion of the data dealing with responses to twelve items on the Student Information and Attitude Questionnaires, which asked the students to evaluate themselves and which elicited information relative to a student's potential to succeed in college. This instrument, administered three weeks after the treatment began (October, 1962) and again near the end of the treatment (May, 1963), was part of a seventeen-hour battery of pre- and posttests to evaluate the impact of the experimental treatments. There were 220 subjects responding on the pretest and 176 subjects responding on the posttest.

The low achievers on these twelve items showed a strong reluctance to report themselves as "less than average." The first instance of inflated self-evaluations occurred in the study when the low achievers overwhelmingly reported that their high school grade records were not an accurate indication of "what they can do." Two hundred answered "no" to this item and only eleven replied "yes." Several previous studies have indicated, however, that one of the best predictors of future grades in school is past grades (Boyce, 1963; Scannell, 1960; Juola, 1960; and McCormick & Asher, 1964). In fact, the American College Testing (ACT) Service (1963) has found that, by combining high school grades with ACT test scores, predictions of college grades are improved considerably. In view of their academic performance in high school, and the data from previous research it could be inferred that these low achievers were probably over-estimating their academic performance. Several other items suggest the tendency of this low-achiever sample to report an extremely favorable self-concept of their ability. This latter finding is not surprising in view of (a) that part of the group had composite ACT scores above the mean and (b) that the group had had high expectations set for them in the selection procedures for the program and the conditioning by the staff to anticipate high achievement.

When asked to indicate on a five-point scale from "little faith" to "considerable faith" the amount of faith in their "ability to do things well in general," only 21, or 9.8 per cent, rated themselves below a 3 rating, or "average"; 86, or 40.2 per cent, rated themselves 4; and 66, or 30.8 per cent, rated themselves at 5. Another question asked the students to indicate on the five-point scale the extent to which they felt they were successful in doing what they set out to do. In answer, 76, or 35.3 per cent, checked 3, or "average"; 113, or 52.6 per cent, checked 4; 8, or 3.8 per cent, checked 5, indicating "always successful"; but only 18, or 8.4 per cent, checked 2, "below average," and not one student checked 1.

When asked to rate themselves "as persons" as compared with other people, 161 EFY students, or 75.0 per cent, rated themselves as "about as good as other people"; 16, or 7.5 per cent, rated themselves "one of the best"; but only 15, or 7.0 per cent, rated themselves "inadequate compared to others."

The EFY students were asked, "Do you believe people should always do what they say they are going to do?" This question was at least partly based on the assumption that an answer to the question would reveal the students' own sense of responsibility. If the assumption is correct, the fact that 152, or 71.77 per cent, replied "yes" would indicate that they had great faith in their own dependability, a trait not so universally expected in low achievers as revealed through the Director and some of the staff's experience in working closely with low achievers.

The subjects were given a choice of several responses to a question on how they felt about most activities in which they were engaged (such as work, school, and hobby projects) in terms of how thoroughly they do them. Sixty-four, or 30.6 per cent, reported: "I try to do everything as well as I can whether I like the work or not"; 125, or 59.8 per cent, answered: "I like to do a good job in those things I enjoy and at least finish the other things"; only 15, or 7.2 per cent, answered: "Getting the thing done is most important to me"; only 3, or 1.4 per cent, answered: "I think it is only important to finish the things I like"; and only two persons, or .96 per cent, reported: "I never get to do the things I want to do, and so I just do things halfway." Another interesting feature of the pattern of responses to this question is that a statistically significantly larger proportion of those EFY students ($p = .01$ as measured by chi-square) who had lower ACT composite standard scores (19 or lower as compared with those with scores of 20 or above) responded with the most socially accepted answer, "I try to do everything as well as I can whether I like the work or not." It may well be that lesser ability, as determined by ability tests such as ACT, and greater social needs increase the discrepancy between elicited verbal response and actual achievement.

When asked, "How do you feel when you fail to do what you have told someone you will do?," 176 students, or 82.2 per cent, checked, "I feel obligated to give them an explanation and immediately do so"; 29, or 13.6 per cent, checked, "I want to explain but generally never have the chance"; only 7, or 3.3 per cent, checked, "I feel they won't worry about it"; and only 2, or .9 per cent, checked, "I never think about it afterward." The low achievers seem again to have selected the socially desirable responses.

Another item asked, "If you and a number of other people worked on a project for the same length of time, would you probably (1) accomplish more than anyone else, (2) accomplish more than most of the others, (3) accomplish about the same amount as the average person, or (4) accomplish less than most of the others?" One hundred thirty-six, or 63.6 per cent, checked answer 3; 57, or 26.6 per cent, checked answer 2; 8, or 3.7 per cent, checked answer 1; and only 13, or 6.1 per cent, checked answer 4. The students were also asked to indicate "how hard they usually work to reach the goals they set" on a five-point scale from "not very hard" to "as hard as is necessary to reach my goals." Forty-three students, or 20.0 per cent, checked the "in-between" step 3; 74, or 34.4 per cent, checked step 4; 73, or 34.0 per cent, checked step 5; but only 19, or 8.8 per cent, checked step 2, "below average"; and only 6, or 2.8 per cent checked step 1.

The five-point scale was the format for answering, "Indicate the extent to which you are a capable, productive student." A rating of 1 indicated "not productive or capable," and a 5 rating indicated "very productive and capable." Seventy, or 32.7 per cent, of the students answered with a rating of 3; 99, or 46.3 per cent, checked a rating of 4; and 34, or 15.9 per cent, checked a rating of 5; but only 10 students, or 4.7 per cent, checked a rating of 2; and only one student answered with a 1 rating. Again, these low-achieving students tended to report extensive optimism regarding their ability.

The students were asked on both the pre- and posttest questionnaires whether they thought that students from the lowest one-third of their high school classes should go to college; the vast majority of responses were affirmative. On the pretest questionnaire there were 171 "yes's," 40 "no reactions," and only 9 "no's"; on the posttest questionnaire the responses were 145 "yes's," 28 "no reactions," and only one "no." Furthermore, when asked toward the end of the EFY Program, "Do you really think you will finish your degree?" 118 answered "yes" and 47 answered "maybe," but only 8 answered "no." It seems that considerable faith that a college degree is "just around the corner" was evidenced here, despite the fact that at the end of the very next autumn quarter only 134 EFY students remained at Southern Illinois University of the 176 who completed the spring term; the fifth quarter after the program started the EFY students numbered only 108 at Southern Illinois University; and only 88 remained after the sixth quarter.

Twelve items on the questionnaires, then, demonstrate a consistent tendency for these low achievers to report rather favorable pictures of themselves. The strength of the tendency is further illustrated by two other interesting features of the responses. First, even though these students were divided into three separate groups, two experimental and one control, and thus received three unique and disparate experiences for a year, statistical analysis of their responses revealed no statistically significant differences between the groups on any of the twelve items reported here. Second, even though some of these items appeared on both the pretest and the posttest versions of the questionnaires and were thus separated by more than eight months in time, no group evidenced a statispretically significant shift (using t tests and chi-square tests) from pre- to posttests on any item reported here. The optimistic responses, then, appeared to be extremely stable reactions on the part of these low achieving students.

Two other items on the questionnaires elicited responses which, if not properly interpreted within the context of the complete questionnaires, would seemingly run counter to the tendency reported above. Several items asked for answers in the students' own words on both (a) why they had done poorly in the past, and (b) why they felt they would do well (or poorly) in the future, academically. In the vast majority of responses to these questions the students placed the responsibility, whether it was "blame" or "credit," for academic achievement upon themselves. This was considered a tendency toward "honesty" in self-evaluation. Also, when asked to check on a five-step scale, from "barely mastered" to "completely mastered," the extent to which they felt they "had mastered the skills of learning," the tendency was to report on the "below average" end of the scale. Scattered throughout other "open-ended" questions in the questionnaires were statements indicating that these students had never learned "how to study" or "proper study habits" or to "take notes well" or to "read with comprehension." The responses on these items, instead of running counter to the general trend reported in this article, actually complement the self-generosity tendency. That is, these low achievers tended to rationalize that, even though they have an above-average potential, they are held back from doing things really well by a lack of some rather specific and mechanical academic skills. These two findings are harmonious and might reasonably be expected, considering the experiences of the subjects.

In summary, low achievers in this study tended to report self-evaluations that were inflated when compared to either the evidence of past research or their ability to remain in college. And, while they rated themselves highly on "general abilities," they admit lack of mastery of academic skills. This latter point was interpreted as an inconsistency in self-evaluations as compared with actual behavior patterns; and limited evidence also suggested the possibility that the discrepancy between elicited verbal responses and actual achievement is increased as a function of relationships between low ability, as measured by ability tests, and high social needs. It is possible and probable that the favorable responses by subjects were the result of selection procedures in which teachers identified potentially able students and the result of high expectations from the EFY staff.

There are at least two theoretical implications from this study which merit further consideration in research. First, the apparent inconsistency among self-ratings and behavior by these low-achieving students was interpreted as an indication that these subjects believe that they have the potential of performing effectively in academic situations, but that they do not have the necessary skills to perform effectively. These seeming discrepancies between student self-ratings and behavior are not inconsistent when examined in respect to findings from attitude research (Festinger, 1957; Rosenberg, et al., 1960; Sherif and Hovland, 1961). Also, these findings resemble those of Borislow (1963), who found that under-achievers rate themselves as high on a "general self" measure as do achievers, but rate themselves pessimistically on a "student self" measure. It has been demonstrated through attitude research that there is a tendency for individuals to adjust for any discrepancies among attitudes, beliefs, thoughts, and behavior. The findings as interpreted in the study support this earlier attitude research. These low-achieving subjects, it is inferred, were able to explain the difference in their behavior (retention in college) and self-evaluations (ratings of general ability), and difference in one self-evaluation dealing with general ability and another self-evaluation concerned with their effectiveness with skills needed to succeed academically in college, by making these attitudes and behaviors congruous. What are seeming inconsistencies in attitude and behavior measures may simply be a matter of the lack of an effective measure of either the behavior or the attitude, rather than a finding refuting the theory related to the harmonious nature of attitudes, beliefs, thoughts, and behaviors.

The second implication from this study for additional research is related to attitude measurement. Students are sophisticated test-takers and tend toward conformity; therefore they tend to respond on open-faced attitude questionnaires in a socially desirable manner (Edwards, 1957). Therefore, it would seem advisable for persons interested in measuring attitudes in educational settings to consider the value of controlling for the social desirability factor, either through use of the SD scale as suggested by Goldstein (1960), or through the use of forced-choice instruments, or projective instruments such as error-choice. Implied here, also, is that more accurate and more efficient disguised attitude measures are needed.

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Implications for a New Technique of Assessing Attitudes

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A recurrent problem in attitude research and opinion polling is the tendency for respondents to hide or distort their "true" opinions or attitudes, especially if social desirability is inherent in the elicited attitude. Kelman (1961) cites several tested techniques of interviewing that aid in "minimizing the likelihood that the respondent will consciously or unconsciously distort his 'private' opinions when expressing them to the interviewer."

There are four general techniques for overcoming distortions due to social desirability: (1) control it with a social desirability scale, as demonstrated by Goldstein (1960); (2) build a permissive climate, through such things as assurances of anonymity and a relaxed atmosphere; (3) use a "forced-choice" attitude scale, with control for social desirability built in; or (4) use "indirect" and/or projective questions or attitude tests. It is with the latter technique that this report is concerned. This paper both reinterprets past findings and reports new data from Southern Illinois University's Experimental Freshman Year Program (EFYP) which indicate that phenomena long recognized by investigators in the field of personality may be a valuable adjunct to indirect and projective attitude measurement.

Theoretical Support from Experimental Research. The tendency to conform in expressing attitudes and judgments has been validated by many studies (Edwards, 1957; Gruen, 1961; Sherif & Hovland, 1961). To prevent such distortion, reports Green (1954), indirect/projective tests have been developed such as the "error-choice." This type of test appears to be a test of information, but the respondent's selections from the possible answers, none of which are "correct," result from his unconscious projection of attitude. Other projective attitude tests, based upon the principle of the Thematic Apperception Test, elicit evaluations of a basically "neutral" stimulus, and the evaluations are interpreted as projected attitudes of the respondent. The thesis presented in this paper is that attitude measurement and attitude research may be significantly advanced by developing tests designed to elicit attitudes projected onto other persons.

Fiedler, Warrington, and Blaisdell (1952) have said that, "To study a person's perception by using other people as stimuli seems . . . an important extension of the investigations which utilize symbols or inanimate objects as stimuli." Subjects asked to report the attitudes of others are likely not to perceive this event as a test of their own attitudes. An examples of this type of projection occurred when Sherif's subjects projected their own attitudes on items they were asked to judge in terms of social realities and did not perceive that their attitudes were being tapped. Sherif and Hovland (1961) concluded that, "This finding supports the possibility of motivation-attitude research using techniques which do not appear to the subjects as a test of their attitudes."

A consistent body of research shows that persons, asked the opinions and attributes of "significant others," project their own attitudes and attributes onto the "significant others." One study asked each of thirty-seven husbands and their wives to respond to an attitude item (a) as he or she felt and (b) how his or her spouse felt. Results showed that husbands reported their wives' attitudes as closer to their own than to those of their wives' actual responses. The same distortion was found for wives' estimates of husbands' opinions. The distortion was attributed to attitude projection (Breed & Ktsanes, 1961).

Vroom (1959) reports a study from which he concludes, "People tend to attribute characteristics which are part of their self concept to persons they like and to deny these characteristics in persons they do not like." Although Vroom considers this finding important for the study of *social perception*, the present writers feel it has at least as much implication for attitude research, especially since Vroom also concludes that:

> The results are contrary to the hypothesis that similarity to another person gives one greater insight into his feelings. The typically positive correlation between similarity and accuracy appears to reflect *the operation of motivational rather than cognitive factors* (Vroom, 1959). (Italics the authors')

A study cited above by Fiedler, et al. (1952), correlating unconscious attitudes and sociometric choice concluded that, "Results indicate that Ss perceive fellow group members they like best as more similar to themselves than those they like least. We found, similarly, that Ss perceive fellow group members liked best as more similar to their ideal-self than those they liked least."

The tendency to project attitudes *closer* to the self (valence) onto similar persons was inferred by Smith (1958) in a study of perceived similarity and projected similarity. He concluded: "The results were consistent with the hypothesis which stated that greater similarity is projected onto similar persons than onto dissimilar persons for both high and low valence materials and that the differential is significantly greater on high valence materials than on low valence material."

Vroom (1960) reports three previous studies which showed that persons tend to estimate group opinion to be closer to their own than it actually is. Vroom concludes from his data on perceived organizational goals that, "Persons with positive attitudes toward the organization perceive the organizational goals to be more in agreement with their own goals for the organization than do persons with negative attitudes." He further concludes:

> The findings suggest that a person's perception of organizational characteristics is affected by his attitudes and goals in much the same way as is his perception of other persons. An individual tends to attribute his own attitudes, opinions, and goals to persons, groups, and organizations toward which he has a positive attitude, and to deny them in persons, groups, and organizations toward which he has a negative attitude.

In a study by Manis (1960) five groups of persons described as either neutral toward fraternities, pro-fraternity, or anti-fraternity read twelve statements about fraternities by writers either neutral toward fraternities, pro-, or anti-fraternity. Then they evaluated the statements on a pro-fraternity-anti-fraternity scale. Manis concluded:

> In responding to the profraternity and the antifraternity messages, there was a curvilinear relationship between attitude and judgment; in both cases, the committed Ss perceived the communicators as occupying more extreme positions than did the neutral Ss. In responding to the neutral messages, the relationship between attitude and

> judgment was linear. Ss who favored fraternities felt that the neutral communicators were more profraternity than did the Ss who opposed them.

The committed persons apparently projected their own attitude onto the writers of the neutral statements.

Breed and Ktsanes (1961) report the results of two New Orleans surveys in which Ss gave their own reactions and an estimate of the reactions of either (a) their fellow church members or (b) fellow townsmen on the subject of integration. Although the authors admit that attitude projection takes place, the authors explain their results in terms of "pluralistic ignorance" and "crystalization" of public opinion. Two findings indicate projection took place: first, "segregators," those scoring high on the segregation end of the scale, to a man, failed to ascribe integrationist feeling to any of their fellows; second, "integrators," scoring high on the moderate end of the scale, "more accurately" perceived that the population contained other "integrators."

> While many persons guess that others share their view (in such cases they may have been influenced by their assessment of group beliefs, or they may have been projecting), many acknowledge that others' views differ from their own. But when this difference occurs, it is *almost always* in the direction of assessing public opinion as more conservative (i.e., prosegregation).

Breed and Ktsanes labelled this tendency to assess public opinion as more conservative "conservative bias"; that is, as reflecting an *older* pattern of opinion for lack of knowledge of *new* opinion. It seems to the present writers that there was probably also some projection of pro-segregation attitude by those who did not reveal their "true" segregationist attitude to the interviewers.

Wallen (1943) made a more direct assumption of projection. He had students at a girls' college indicate their opinions on three propositions of policy by checking "yes," "no," or "no opinion." He also asked them to indicate on each issue what percentage of their schoolmates would make the various responses. The positive correlations between students' own and guessed attitudes in the study were explained as, "a reliable tendency for our subjects to estimate the attitudes of others so that their own opinion coincides with that of the estimated majority." Wallen inferred:

> A selective action may have occurred in the subjects' recall of conversations in such a way that those conversations which reinforced an attitude would be more readily remembered than those which were in opposition . . . Or perhaps our subjects thought of themselves as typical and ascribed their own views to the majority of the group. In some cases estimates may have served to justify and rationalize the attitude (Wallen, 1943, p. 273).

Previous studies, then, indicate the following tentative conclusions:

1. Persons tend to conform in socially desirable directions; this social desirability may distort elicited verbal attitudes.
2. Persons tend to project personal characteristics and attitudes of their own onto those they like; they tend to deny them to persons they dislike.
3. Use of "significant other persons" as stimuli for a projective question is a logical extension of using some inanimate object; it is likely to be perceived as a question testing something other than the attitude of the respondent.
4. Persons tend to ascribe to their spouses attitudes more congruent to their own than to those of their spouses.

5. Workers perceive their company's goals as favorable or unfavorable, depending upon their attitudes toward the company.
6. The more extreme a person's attitude, the more likely is that person to project his opinion onto others, and the more likely to project his own attitude upon the source of predominantly "neutral" statements.
7. Ascribing of one's own attitudes to others may be due to rationalization or "wishful thinking," an explanation compatible with Festinger's theory of cognitive dissonance (Festinger, 1957).

EFYP Data. In the fall of 1962, Southern Illinois University began a demonstration experiment to determine whether students who graduate in the lowest third of their high school graduating classes benefited from special curricula, counseling, and training in their freshman year of college. The 220 Ss were divided into three groups (I, II, and III), two experimental and one control. More complete descriptions of the subject selection procedures and experimental treatments can be found elsewhere (Cohen, Kibler, & Miles, 1964).

The EFY staff agreed that both Group I students, who had an unusually integrative curricular program in a unique, highly structured environment, and Group III students, the control group, who took regular college courses, had finished the year with more positive attitudes toward the EFYP and college than had the students in Group II, who had been hostile to their many sessions of non-credit programmed instruction and counseling. This subjective judgment was substantiated by the results from "Student Information and Attitude Questionnaires" which the EFY students completed, one before, the other after, the program, Data suggested that, when asked to evaluate the attitudes of their peers, the EFY students tended to report their peers' attitudes as the same as their own.

It was evident that the Group II Ss had enjoyed their year less than the Ss in the other two groups. For instance, when asked on the posttest questionnaire what group the Ss would have preferred had they been given a choice earlier, the Ss in both Groups I and III responded more often than did the Ss in Group II that they would have chosen their own group. Chi-square analysis of the responses revealed that this difference was statistically significant ($p = .05$). On the question relative to whether the EFY Program should be "continued in the future," the students in Group II responded least often in the affirmative, though not to a statistically significant extent.

Responses to two items on which social desirability might be expected to exert an influence revealed a "positive" reaction in terms of social desirability. Asked the extent of "personal attention" from the EFY staff they had received, the mean responses of all EFY groups were "above average." Also, when asked if they "enjoyed school," the vast majority of responses of all groups were "yes." Groups did not differ on these items to a statistically significant degree.

When asked on the posttest to indicate, on a five-step scale from "unfavorable" to "highly favorable" their opinion on how the "_other_ EFY students" regarded the EFY Program, the only group with a mean response of less than 3 (average), was Group II, and this mean differed from the _favorable_ mean responses of the other two groups to a statistically significant degree ($p = .01$) as determined by a _t_ test for independent measures. Also, Group II was the only group to manifest a statistically significant shift downward on responses to this item from pretest to posttest (from 3.36 to 2.74) as determined by a _t_ test for related measures ($p = .001$).

Implications. The implications for research in exploring this potentially fruitful detour around the social desirability roadblock to the securing of "true" verbal attitudes appear obvious. The authors list a few research possiblities here, some of which are already underway. A measurement of attitude projected onto significant others might be used:

1. To establish social desirability weights derived from differences between "perceived-self" and "perceived-significant others" ratings to control for social desirability in present attitude tests.
2. To develop general indexes of conformity or "self-perception-adjustability" for use in adjusting elicited attitude scores.
3. To examine non-intellective factors known to relate to testing and achievement, such as motivation, anxiety, and personality.
4. To develop other types of tests (e.g., to replace "preference" and "favorability" scales in the development of forced-choice instruments).
5. To determine the effects of various specific positively reinforcing stimuli (significant others, significant organizations, etc.).
6. To determine, for experimental purposes, persons with extreme views on a subject by having them react to items determined by Q-sorts to be "neutral toward" the subject.
7. To supplement traditional public opinion and other attitude research measures (e.g., It might be rewarding to include, in an off-hand manner, a question such as, "How do you expect a majority of your friends to vote?" in a poll of voting behavior. Actual voting behavior can then be subsequently compared to both the reported opinion and the "significant-others projected" responses).

8. To develop a criterion measure to determine whether "open-faced" or "projected-onto-significant-others" attitude tests more nearly tap "true" attitudes on a number of social issues (e.g., Use the proposed measure in a depth analysis conducted by skilled interviewers and validate through actual behaviors on these social issues).
9. To determine the extent to which persons, organizations, etc. (significant and non-significant stimuli) act as influencing variables in the processes in which attitudes are developed and changed.
10. To develop theoretical models for validity and reliability studies in attitude measurement.

The above list suggests some of the research problems which need investigation in order to determine the value of the attitude measure proposed in this report--attitude measures designed to elicit self-attitudes projected onto significant-other persons or positively reinforcing stimuli (e.g., organizations).

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